THE

AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

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A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

MEADOW LANDS.

Mowing.—It is an old and oft-repeated adage, which has long passed current among our farmers, that in cutting grass, "an inch at bottom is worth two at the top;" and they practise accordingly, and mow their meadows as close to the ground as possible. Now so far as clover and herds-grass are concerned, we deny the truth of the adage entirely; for near to the ground the stalks of these grasses are coarse and dry, and the leaves decayed, and they are consequently divested of nearly all their nutritive quality; it is therefore adding nothing to the value of the hay to cut so close, and it often does the meadows great injury. If dry weather follows immediately after close mowing, the stubs of grass left so short, and even the tops of the roots get so scorched under the hot sun, that vegetation will not start again during summer, and the ground is left quite bare during the following winter, which is injurious to the meadow, and an early start of the grass the following spring. In cutting herds-grass and clover, we would therefore be cautious about mowing too close; red top and some of the natural grasses, especially those in water-meadows, may be cut nearer the ground.

After Management.—No sooner is the hay taken off the meadows, than many are in the habit of turning their cattle on to them for pasturage, which we conceive to be nearly as injurious as close mowing; for any grass which may have escaped the scythe, is sure to be gnawed down by a hungry herd of animals. Our practice has been as soon after mowing as possible, to give the meadows a slight top dressing of compost, and a small quantity of plaster of Paris, or leached ashes, and to shut off all stock till the grass has got well up, and then turn into pasture, taking care to keep the cattle out during wet or frosty weather, so that they might not endanger poaching the land. In this way, on lands of only a moderate degree of fertility, we have been able to cut an average product of one and a half tons of hay annually per acre, besides getting a considerable amount of pasture from them; and at the same time, we think that we have rather increased the fertility of the meadows than otherwise, and improved the herbage. We are careful to beat the manure fine early in the spring, which has been dropped by the cattle pasturing on the meadows the preceding fall.

Time of Cutting Hay and Grain.—We think

our farmers err frequently by cutting their grass *too early*, and their grain *too late*. If the former be cut too early, the saccharine matter is not fully matured, and it is consequently not so nutritious. We usually allow the grass to be just going out of flower at the time of cutting.

When the straw of grain begins to turn yellow, and the berry is full but not hard, is the best time for cutting. Scarcely any loss will then take place from shelling, and the straw is much more valuable for fodder. But as we gave full directions for harvesting grain and hay in the July No. of Vol. I., we must refer those of our readers seeking further information on these topics to those articles.

FINE WOOL SHEEP.

RAMBOUILLET MERINOS.—Agricultural products of all kinds being so very low throughout the Union, it has become quite a desideratum on the part of the farmer, to know to what objects he can turn his attention, with the best prospect of realizing the surest and greatest profit from his land. We have thought, notwithstanding its unprecedented low price, that the raising of a superior quality of fine wool, especially on the hilly lands of the south and west, was now, and would continue to be, one of the safest and most lucrative branches of husbandry. We have accordingly so expressed ourselves from time to time in the pages of this journal, and we hope that our readers will not be impatient, if we continue to advert occasionally to this very important subject.

By the census of 1840, we see that there were, in round numbers, twenty millions of sheep in the United States. On account of the prevailing low price of wool and mutton for the past three years, it is generally supposed that there has been no increase among the flocks of the country, and that they are now about the same number as in 1840. As in this number, lambs as well as grown sheep are included, it will be fair to suppose that but little over one half, or say eleven millions, are shorn. The average product of fleece in these, we think we may be safe in estimating at 2 1-4 lbs., which would make 24,750,000 pounds of wool per annum. The average value of this is probably 21 cents per pound, which would amount to $5,197,500. Now by producing a superior quality of wool, its value may be enhanced full nine cents per pound, which would be adding to the income of our farmers, no less a sum annually than $2,227,500, which in these times of pecuniary distress, would be felt as a very desirable and convenient increase to the earnings of agricultural labor.

Where a mild climate prevails, there is no doubt but that the increase of a flock after all the fixtures are prepared for its accommodation, will pay the expenses of keep and attention, and that the wool shorn from it will be clear gain. Sheep also are the best renovators of the soil; that is, by pasturing them upon poor or wornout lands, they will restore them to fertility sooner than any other kinds of stock; it therefore behooves the farmer and planter to consider, with these double objects before them, viz., the profits of agriculture, and the improvement of the soil, whether they can do better as one branch of their business, than to keep 100 to 1,000 sheep, according to the situation and the extent of their landed property.

Mutton being but a secondary, and wool the paramount object with the American farmer, the best animals to start with, or make improvements on those already on hand, are undoubtedly the Spanish Merino. And here we have to lament the great deterioration in blood and breeding, of those hardy and inestimably valuable flocks which were imported direct from Spain by Col. Humphrey and others, from the years 1808 to 1811. These had scarcely overcome prejudice, and got well planted among us, than our countrymen, true to their character, and despising pedigree and distinct breeds, and neither knowing nor caring for their value, and seized with the conceit that they could *improve* them by *crossing*, not only foolishly commenced mixing up these importations by coupling them together in all sorts of ways, thus making, to use a Spanish expression, a complete *olla podrida* (hodge podge mess) of the breeds, but in addition to this, as if it were not bad enough already, they must needs add by way of still further and more *scientific improvement*, crosses of the miserable culls and off-scourings of the open-fleeced Saxon flocks, imported by a band of mere mercantile speculators, in such numbers from the years 1824 and on.* But thanks to the good constitution, strength, and fixed thorough breeding of the original Spanish Merinos, let the *improvers* do their worst, they could not wholly destroy them; and there are still large and valuable flocks scattered over the country, from which good ewes may be selected at a small cost, with which those disposed to go judiciously into the rearing of fine wool, may commence with the certainty of starting as near

* For a complete exposure of these importations, see Mr. Grove's admirable articles, Vol. I., p. 313 of the N. Y. State Society Trans. for 1841. And for a capital communication on the subject of Merinos, see Examiner, p. 52 of our May No. of current volume.

right as circumstances and a prudent and economical outlay of capital will permit, and then with the use of pure bred, unadulterated Merino bucks, they may go on in the broad road of improvement, and be annually increasing the value of their flocks, raising the standard of *quantity* as well as *quality* of the wool produced, and thus adding greatly to the incomes of the sheep husbandmen.

Among those pure bred flocks from which bucks may be chosen, with a view of effecting this important purpose, that undoubtedly superior to all others, within our knowledge, in the United States, is possessed by Mr. D. C. Collins of Hartford, Connecticut. Travelling in Europe in the year 1839, and having his eye occasionally upon its agriculture and improved stocks, among other things, this gentleman was struck with the marked superiority of the Spanish Merino, composing the celebrated royal flocks kept at Rambouillet, in France, about 40 miles from Paris. He accordingly determined to procure a small breeding flock, with a view of raising bucks to restore the fine woolled sheep of our country to their original character for strength of constitution, and weight of fleece, together with excellence of quality. The following year he obtained two bucks, and twenty ewes, from the best of the Rambouillet flock, and brought them over to this country. These he has continued to breed here with great success, and has now a fine flock of their produce, fully equal to the original importation.

On p. 171, Vol. I. of the Agriculturist, we gave a short notice of these animals; but the subject of the production of fine wool in our country seems at present to be so important, that we have thought we could not do our readers a greater service than bringing the matter up again for their serious consideration. Understanding, therefore, that Mr. Collins intended shearing his flock on the 15th of last month, we started for Hartford, and arrived there on the morning of the day previous for the purpose of inspecting them in full fleece, and then in their naked forms, as also some flocks alongside of them, of what may now be termed the native Merino. Altogether we spent three days in our examination, taking samples of the wool, weighing the animals and their fleeces, and studying their forms, from the lambs just dropped, up to the full grown sheep of a mature age. The result of our observations, and the information we obtained, with respect to these Spanish Merinos from the Royal flocks of Rambouillet, and the produce bred from them in this country, is:—

1. They possess as good constitutions, and are as thrifty and as hardy as any native or imported sheep whatever.

2. They attain a great age, have been known to reach 20 years, and may be depended upon as good breeders and wool producers till 12 to 14 years old.

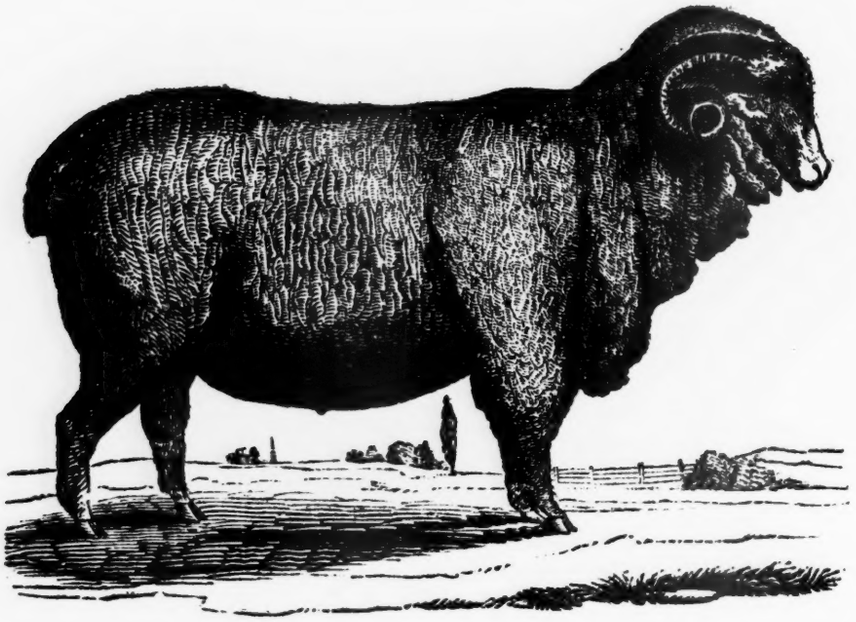
3. They have large, loose skins, full of folds, especially around the neck and below it, on the shoulders, and not unfrequently over the whole body; the wool thickly covering its surface, the forehead, cheeks, and the legs clear down to the hoofs, giving the fleece the appearance when shorn and spread out in its ample dimensions, of having been taken from the carcass of a huge buffalo, rather than so small an animal as the domestic sheep.

4. The fibre of the wool is very fine, quite equal to the best Merino in Spain, and is the very antipodes of that of which so much complaint is made by the manufacturer, of being harsh, dry, crispy, and wiry. The fleece opens of a brilliant creamy color within, on a skin of rich pink, and is soft, glossy, wavy, and very even over the whole body; is exceedingly close and compact, and has a yolk free from gum, and easily liberated when it comes to be washed, but which protects the wool from the weather, and keeps it free of the dead ends that are so objectionable, and that make so great a loss in the more open fleeces of the Saxons and their crosses. It becomes of the purest white when scoured by the manufacturer, and still retains its mellow, oily touch, so grateful to the handling of good judges. Its felting properties are beyond dispute, making it a choice material for the manufacture of fine broadcloths and cassimeres.

We are tolerably familiar with the Merinos imported direct from Spain, and the subsequent breeding in the United States, and we find the distinguishing superiority of the Rambouillets over them, is in the size of their skins, enabling them to cut a greater proportion of wool. In their form they resemble the Paular Merinos, more than any other tribe of Spanish sheep that have fallen under our observation. They are also from one tenth to one fifth larger in carcass; are equally thrifty, hardy, and long-lived; give more wool for their size, and of a better quality; and upon the whole, present a grander and more noble appearance. It is not contended that the Merinos of any tribe have the finished, full round forms of the English mutton sheep. They have been bred for other purposes. Their flesh is reasonably good when made wethers, and killed at a suitable age, and their forms are susceptible of improvement, for in this particu-

lar we occasionally see them nearly equal to a South Down or Leicester. Below we give the portrait of a buck of Mr. Collins' importation. To our eye he is strikingly majestic, and as a *wool sheep*, we do not see how he could be altered for the better.

THE RAMBOUILLET MERINO BUCK GRANDEE.—(FIG. 24.)



Imported by, and the Property of, D. C. Collins, Esq., Hartford, Connecticut.

Grandee's fleece was suffered to grow from 1839 to 1841, two years, and weighed on shearing 26 pounds 3 ounces, clean, unwashed wool. One year's fleece in 1842 weighed 12 3-4 pounds. At three years old in France he sheared 14 pounds. Standing in his form as sketched in the position above, he measures in a direct line along the body, from the setting on of the horns to the end of the rump, 3 feet 8 1-2 inches; height over the rump and shoulders 2 feet 5 inches; his weight in good fair condition is about 150 pounds. The ewes are proportionably large, are great milkers, and the best of nurses. Both sexes are quiet in pasture, and of a gentle, docile disposition.

The average of Mr. Collins' flock of ewes in this year's shearing, we found to be 6 pounds 9 ounces. Allow one fourth loss for clean washing, and it would leave the average for the ewes at 4 pounds 15 ounces. The average of the native Merino fleeces clean washed is not over 3 1-4 pounds, and that of the Saxons does not exceed 2 1-4 pounds.

WHEAT AND CHESS.

We see in the Prairie Farmer, that Messrs Owen and Vance, members of the Illinois legislature, assert that they have found on prostrate wheat-stalks, partially filled, a spear putting out from the first or second point above the root, on the top of which was a full-grown cluster of cheat. Mr. Mann, also of that state, found several stalks of wheat and chess growing from the same root. These he washed carefully, so as to avoid the possibility of mistake.

Without intending to provoke the wheat and chess controversy, we would thank some of the advocates of the convertibility of wheat into chess, to inform us, whether the converse of the proposition has been as nearly demonstrated as the first? That is, whether in any instance has it been shown, that chess or cheat, by one or more years of careful cultivation, has been converted into wheat? If wheat is converted into chess under certain circumstances, then it follows clearly, that chess ought under other favorable circumstances, to be changed back again into wheat. We will thank some of our readers for demonstration on this subject; clear, decided, and incontrovertible, such as will for ever settle the matter.

ANALYSIS OF MAIZE OR INDIAN CORN.

We see it asserted in the May No. of the Cultivator, that no analysis by foreign chemists has yet

been furnished us of maize or Indian corn, and the editors infer, that Dr. Dana, in the New England Farmer, has been the first to do so. Indian corn has been analysed by the German chemists repeatedly, and we have now a translation of one of these lying before us, taken from Burger's Manual of Land Husbandry. There are also two tables in Thomson's Chemistry of Organic Bodies, published in London in 1838. That of Bizio was made as early as 1823. Professor Gorham's we believe, somewhat earlier.

Analysis of 100 *parts of Maize, by Gorham.*

	Fresh.	*Dried.*
Water	9	-
Starch	77	84.599
Zein (gluten)	3	3.296
Albumen	2.5	2.747
Gum	1.75	1.922
Sugar	1.45	1.593
	94.70	94.157

Analysis of 100 *parts of Maize, by Bizio.*

Starch	80.920
Zein (gluten)	5.758
Extractive	1.092
Zimome	0.945
Gum	2.283
Sugar	0.895
Fat oil	0.323
Hordein, (nearly like starch)	7.710
Salts, acetic acid and loss	0.074
	100.000

PROGNOSTICATIONS OF THE WEATHER.

A friend of ours, a captain in the United States navy, has handed us the following table for foretelling the weather, which he says he has consulted for 20 years in different latitudes in America, and has generally found it to be relied upon. It was originally composed by that eminent astronomer, the elder Herschell, and added to somewhat by the late Dr. Adam Clarke. A knowledge of the weather a few days in advance, is of considerable consequence to the farmer, and especially during harvest-time; and we should be glad if our readers would make their observations in accordance with these tables, and give us any information that they may happen to possess on this interesting topic.

A TABLE FOR FORETELLING THE WEATHER, THROUGH ALL THE LUNATIONS OF EACH YEAR, FOR EVER.—This table, and the accompanying remarks, are the result of many years' actual observation; the whole being constructed on a due consideration of the attraction of the sun and the moon, in their several positions respecting the earth, and will, by simple inspection, show the observer what kind of weather will most probably follow the entrance of the moon into any of its quarters, and that so near the truth, as to be seldom or never found to fail.

If the new moon, the first quarter, the full moon, or the last quarter, happens

TIME OF CHANGE.	IN SUMMER.	IN WINTER.
Between midnight and 2 in the morning,	Fair.	Hard frost, unless the wind be south or west.
" 2 and 4 morning,	Cold, with frequent showers	Snow and stormy.
" 4 " 6 "	Rain.	Rain.
" 6 " 8 "	Wind and rain.	Stormy.
" 8 " 10 "	Changeable.	Cold rain if wind be west, snow, if east.
" 10 " 12 "	Frequent showers.	Cold, and high wind.
At 12 o'clock, at noon, and 2 P. M.	Very rainy.	Snow or rain.
Between 2 and 4, afternoon,	Changeable.	Fair and mild.
" 4 " 6 "	Fair.	Fair.
" 6 " 8 "	Fair, if wind northwest. Rain, if south or southw'st	Fair and frosty, if wind north or northeast. Rain or snow, if south, or southwest.
" 8 " 10 "	Ditto.	Ditto.
" 10 " 12 "	Fair.	Fair and frosty.

Observation 1. The nearer the time of the moon's change, first quarter, full, and last quarter, are to midnight, the fairer will the weather be during the seven days following.

2. The space for this calculation occupies from ten at night till two next morning.

3. The nearer to midday or noon, the phases of the moon happens, the more foul or wet weather may be expected during the next seven days.

4. The space for this calculation occupies from ten in the forenoon to two in the afternoon; these observations refer principally to the summer, though they affect spring and autumn nearly in the same ratio.

5. The moon's change in the first quarter, full, and last quarter, happening during six of the afternoon hours, that is, from four to ten, may be followed by fair weather; but this is mostly dependant on the wind, which is noted in the table.

6. Though the weather, from a variety of irregular causes, is more uncertain in the latter part of autumn, the whole of winter and beginning of spring, yet, in the main, the above observations will apply to those periods also.

7. To prognosticate correctly, especially in those cases where the wind is concerned, the observer

should be within sight of a good vane, where the four cardinal points of the heavens are correctly placed. With this precaution he will scarcely ever be deceived in depending on the table.

NEW YORK FARMERS' CLUB.

The first meeting of this club was held at the Pacific Hotel in Greenwich street, on Thursday, the 22d of June. A numerous assemblage of gentlemen were present, most of them bringing bouquets of flowers, fruits of the season, or something curious of the productions of nature and art for inspection. The meeting was opened at half-past two o'clock, P. M., the Vice President of the Agricultural Board of the American Institute, Mr. Wyckoff, in the chair. Rev. Mr. Choules, secretary.

Mr. Morris, of Morrisania, who, among other stock on his fine estate, keeps a herd of 120 cows for the purpose of supplying the city with milk, gave an interesting, verbal statement of his method of feeding, particularly with Indian corn, sown broadcast for soiling. This, in its season, he prefers to all other food; not only from its superior yield per acre, but also on account of the cows giving a superior quantity and quality of milk when fed upon it.

Mr. Fry's lactometer, to detect the quantity of water in milk was then introduced and explained. It is formed by a double glass globe, the upper one a little distance from the lower and empty—the lower one loaded with a certain quantity of shot. The gauge runs up from the larger globe, and is similar to, and marked off like the degrees of the tube of a thermometer. It is a cheap, simple instrument, and considered quite effectual.

Mr. Rouley presented a coat made of felt-cloth.

Mr. Lamb submitted a machine for reaping by horse-power.

Mr. Meigs read a paper on the culture of potatoes.

Mr. Allen presented samples of Rambouillet Merino wool, which were very much admired.

A variety of topics were then discussed in an excursive manner, and after an interesting and pleasant meeting of three hours, the club adjourned to hold its second meeting at the same place and hour, on Tuesday the 18th of July.

For the accommodation of such members as please, a handsome dinner is provided at the hotel at two o'clock, at the price of fifty cents; after which the club will adjourn to its meeting at half past two precisely. All those wishing to be present will then please attend. It is a free meeting entirely, and without charge. Gentlemen from the country are invited to be present, and all interested in the promotion of agriculture; and it is to be hoped that each will bring some samples of flowers, fruit, and any of nature's productions of the season. A good meeting is anticipated, and a pleasant and profitable discussion.

THE PASSION-FLOWER.

(Fig. 25.)

The Passion-Flower (*passiflora*) it is supposed was first introduced into England from Surat in Persia, and in its appendages, fancy has made it represent the Passion of our Savior, and hence its name. Rapin beautifully alludes to it in his quaint language:—

"In summer months will *Granadilla* show
Her bloom, which first in *Amazonia* blew,
And graced the shore sent hither from *Peru*.
On lofty stems indented leaves adorn
The blossoms, which, with prickles, as the thorn,
Our Savior's Passion in their form declare,
Show all the barb'rous nails and bloody spear;
For from the midst a three-forked chive she rears,
And each bent grain like a crooked nail appears."

There are more than sixty species of this curious flower, with quite a variety of colors. It is a great favorite with us, although from certain associations connected with it, we can never look upon its ethereal form, and beautiful mingling of blue, and red, and white, without a feeling of sadness. Some of the species are odoriferous; others bear fruit.

DEVON CATTLE.

A herd of five head of these beautiful animals passed here last month on their way to the farm of

Mr. L. F. Allen of Black Rock, this state. They are from the celebrated herd of George Patterson, Esq., of Sykesville, near Baltimore. For a full description of this herd we would refer to our April No., p. 19.

To unusual size and fine points, these Devons add good milking qualities, and it was from the same herd as these, that Mr. Bloomfield, a tenant of the Earl of Leicester at Holkham, challenged all England to milk with him.

POUDRETTE.

THE use of this valuable manure is every year becoming more general. The highly concentrated vegetable nutrition contained in it, and the large and rapid growth it affords when properly applied, is fast acquiring for it a high rank among modern manures. There is no addition made to the value of the original material from which it is made, by the manufacturer; and it is therefore in the power of any farmer or gardener to apply what is within his reach, without adding to it the expense of transportation, packages, and the profit of preparing it. By adding dry peat, refuse tanner's bark, or even turf, with charcoal or ground gypsum, all the offensive effluvia is prevented, and the article can be removed without annoyance.

An excellent plan for effecting this, is given by Mr. Woodfire in the Southern Planter. He says: "I collect the stercoracious matters separately in large vessels. After the urine has become putrid, which will require but 2 or 3 days in warm weather, and 10 or 15 in cold, add sulphuric acid (oil of vitriol) slowly to the urine. If the urine is putrid, a powerful effervescence will immediately take place. The acid must be added till effervescence ceases. By this process the carbonic acid is driven off, and the sulphate of ammonia is formed, which has no volatility, except at a high temperature. Thus is secured the ammonia formed by putrefaction, which would otherwise escape. I then add the liquid to the solid excrement, incorporating them well together, until a very thin batter is formed. Into this mass I stir my finely-pulverised charcoal, according to my judgment, without regard to any precise quantity, which is then spread on tight boards in the open air. Stir frequently till the whole is dried, then pulverise and put it up in barrels for crops."

Now, here is the whole story of preparing it nicely, for sale. The oil of vitriol is a cheap article, and within any one's reach; but the same object is attained by using gypsum, which is a combination of sulphuric acid and lime. When this is used, a double salt is formed. The acid of the gypsum leaves the lime to unite with the ammonia of the urine, and the carbonic acid of the manure unites with the lime, making a double compound, sulphate of ammonia and carbonate of lime, or common lime, and the object is accomplished at less expense. Dry pulverised peat is a substitute for charcoal, even if it is desired to put up in packages; and, being with many a cheaper material, may be properly substituted for it. Or if required for use on the premises, waste, tan, or common turf, well filled with decayed vegetable matter may be used.

TO AGRICULTURAL SOCIETIES.

At the meetings of the various Agricultural Societies in this and the adjoining states last year, our publication not having completed its first volume, and we being little known, but few copies of it were voted for distribution for premiums, while hundreds of our contemporaries were taken for this purpose. We do not complain of any partiality in these proceedings, for under the circumstances of the case, none other could be expected; but now that the American Agriculturist is fairly established, and the first volume bound, forming a convenient, handsome, and most useful book for the Farmer, Stock-breeder, and Horticulturist, and the second volume is coming promptly out on the first of each month in its regular numbers, we trust that a *fair share* of the patronage of our own State Societies, at least, will be extended to us.

As to the editorial department of this work, we say nothing; but our correspondence we feel proud of, and we challenge any journal to show one of greater ability or variety; and for convenience of form, beauty of type, paper, and embellishments, we are neither equalled in this country nor in Europe—and for price, it is among the *cheapest*. The paper is also established on a *firm* basis—its publishers are both able and willing, and have set apart a sufficiency of funds, if necessary, to sustain it in any event. But of this, we are happy to say, there is no necessity; for we have already a larger list of subscribers to the present volume in the first three months of its existence than we numbered on the last in twelve months, and this list is daily and rapidly augmenting. There were more added the past month than any one yet since the starting of the paper, and we shall promptly commence Volume THIRD on the 1st of January, 1844, and so continue to issue double numbers each month till Volume Second is completed, unless we should decide upon finishing it in double numbers previously.

To societies and clubs, the American Agriculturist will be put in monthly numbers at Five Dollars for eight copies. Vol. I. handsomely stitched in paper covers, five copies for $4; elegantly bound in cloth, five copies for $5. We trust that this liberal discount will ensure us numerous orders; for at these prices a large edition is necessary to pay the bare cost of printing, paper, embellishments, and binding, without leaving a single cent for either publishers or editor.

AMERICAN AGRICULTURIST ALMANAC.

An Almanac under this title will be issued in a few days by J. Winchester, from the New World press, 30 Ann street, edited by A. B. Allen, assisted by an association of well-known practical writers on Agriculture, which we think we may safely say, will be found the most elegant and complete work of the kind ever yet published. It will contain 64 pages octavo, on fine paper, and be embellished with numerous wood-cuts, and sold at the low price of 12 1-2 cents at retail, or $8 per hundred.

This Almanac will comprise,

1. Astronomical observations and tables calculated for the meridian of Montreal, Boston, New York, Philadelphia, Charleston, and New Orleans. Also valuable Statistical Tables.

2. A complete Northern Calendar for every month in the year, embracing all necessary directions for the management of the farm, garden, and orchard.

3. A complete Southern Calendar for the Plantation, &c., &c.

4. Miscellaneous matter, such as is designed to advance the interests and improvement of the Planter, Farmer, Stock-breeder, and Horticulturist.

It will be seen now, that the American Agriculturist Almanac will be very comprehensive and full in its contents; calculated alike for the Canadas, the northern and middle states, and the south, and we bespeak for it the favor of the public. It is issued at this low price, hoping thereby, to make it more acceptable to the community, and a large sale will be necessary to indemnify the publisher. Our exchange papers will confer a particular favor upon us by noticing the work, to all of which a copy will be sent. Orders to be addressed to J. Winchester, 30 Ann street.

TO THE FARMERS.

Some of our old established periodicals complain of a great falling off in their subscription-list; we regret much to hear this, and it ought not to be so. They have labored hard and long for the best interests of the farmers, and are at great outlays in keeping up their establishments, and the agricultural community owe it to themselves and the country to see them well supported. Every subscriber should use renewed efforts, therefore, to induce others to come forward and support these journals, which are adding so much to their individual and country's good. What is a dollar to each of them, of which they so much complain? There is not a farmer who does not spend *ten times* this amount annually in some needless indulgence, that can never do him a hundredth part as much good as reading an agricultural paper.

The European world is daily making great advance in the science and practice of agriculture; and will the *Freemen* of America stand still in their *minds*, and let those who possess so few of their political privileges, obtain the superiority over them? It is a mockery any longer to answer "we can't subscribe on account of the *hard times*." The times we reply, are *good enough*. Look at our price current on the last page, and see how wheat, pork, beef, and other products, have advanced within four months. These articles are higher now in proportion than most things, and recollect your products are paid for in specie if you wish it, and not in swindling bank-notes. No one who farms with skill and prudence can help making money. Let the cry of "hard times" then cease, and for it substitute, "*Support the Agricultural Papers.*" Do this, and practise the good advice they are constantly giving you, and any man who shall then be bare-faced enough to utter the words "hard times and can't afford it," will be hooted at by his neighbors, and be very likely to have the phrase before fully pronounced, choke him in the throat. These may be called strong words, and harsh expressions. Perhaps they are, but nevertheless, they are true. The farmers are often flattered by being called the "bone and sinew of the country." Take care, my friends, if you stop reading, that you do not degenerate to these alone. For what are mere bones and sinews, without the enlightened and well-informed mind to direct and move them? An American farmer should strive to be the *light* and *mind* of the country, as well as its bone and sinew—it is his exalted privilege—his destiny, otherwise he is but a mere *moving machine—a living automaton.*

GREAT SALE OF STOCK.—We would refer our readers to Mr. Bement's advertisement of the sale of his fine stock of Durhams, South-Down sheep, &c. Mr. Bement is one of our oldest and best established breeders, and has undoubtedly some choice stock well worthy the attention of those who wish to possess a good class of animals, and at his sale there will be an excellent opportunity for those desiring improvement to possess themselves of it.

AGENTS AT THE SOUTH AND WEST.—Dr. A. Campbell, and Mr. R. H. Hendrickson, of Middletown, Ohio, are hereby authorized to receive subscriptions at the south and west for the American Agriculturist.

☞ We have given up this number so entirely to correspondents, and an accumulation of little matters, that Western Sketches No. 2, Tour in England No. 15, and Country Excursions No. 1, in which we had noted copious details of farms and stocks in this neighborhood, are crowded out, and left for our next. We think our correspondence very able this month, and it will well repay the reader a close and attentive perusal.

ORIGINAL CORRESPONDENCE.

In our last we briefly alluded to the death of Judge Garnett. We are now favored with a memoir of this distinguished agriculturist, by one of the members of his family. It will be found particularly worthy of perusal, for it shows a disinterested devotedness through his whole life, to the best interests of his country. May all, and especially the youth of our land, emulate the example here set before them. We trust that a selection will eventually be made from Judge Garnett's writings for publication, accompanied with a more extended memoir of him, and embellished with an engraved portrait. A single volume judiciously made up, we are confident would be highly prized and sought after by his many friends and admirers.

For the American Agriculturist.

MEMOIR OF THE HON. JAMES M. GARNETT OF VIRGINIA.

James Mercer Garnett was born the 8th day of June, 1770, at his family residence, Elmwood, in Essex county, Virginia. His father was a wealthy planter, and a gentleman of the old school, who trained his son from early youth to habits of manly hardihood; while his mother, a woman of fine mind and education, awakened in him a love of knowledge, and that native sense of honor and duty which alone can impart firmness and dignity to the character.

Mr. Garnett was a member of the Virginia Assembly, and afterward of Congress, where he espoused the principles, to which he ever afterward adhered, of the state-rights republican party, as based on the celebrated resolutions of '98, '99. Yet later in life, he took an active part against the protective system, and was a member of the last free trade convention, which met in Philadelphia. Finally, he was elected to the convention of 1829 for the amendment of the constitution of his own state. But it was not as a politician that he was best known. His ambition never lay in that direction, and if public office came to him, it was as the natural incident of his character and position in society. His feelings became more deeply interested, and his talents more entirely devoted to the great causes of agriculture and education with every year of his life; and this sprung from that public spirit which so eminently distinguished him.

He saw more clearly than most men, the dangers to which our institutions are exposed, by the burning thirst for wealth, which drives our people forward with a reckless impetuosity that counts any means justified by the end. Mr. Garnett thought there could be no surer remedy for this evil, than to render agriculture profitable, and so direct this passion for accumulation to an employment, which he considered that all ages and experience have proved the most healthful both to body and mind, and which must ever furnish the staple of the national prosperity. But this was not enough; he wished to see the popular mind enlightened, and the tone of public feeling elevated by a system of comprehensive education, which should be based on moral and religious instruction. So important did he consider this foundation, that he was almost ready to reject every scheme of public education without it. He believed that to give man knowledge without virtue, was to create an intellectual giant, who would have no better guide for his mighty powers than his own blind impulses. But Mr. Garnett was eminently a practical man, and he was ever ready in suggesting the means to effect these objects. For the improvement of husbandry, he was active in recommending the formation of neighborhood societies, which, with the aid of agricultural newspapers and state associations, would stimulate individual exertion, and excite an intelligent activity in the community.

The attempt to erect a National Institution of Agriculture, where the local societies were to be represented, failed, as every one knows. No one was more active in its cause than Mr. Garnett, though he feared from the beginning that the country was not ripe for it. His ultimate opinion was, that it should become a branch of the National Institute of Science, and unite in efforts to obtain the benefit of the Smithsonian fund. He wished also that the first step in every state should be the commencement of an agricultural society, and that a school of experimental farming should be connected with every state university. Mr. Garnett lived to see his favorite pursuit receive a new stimulus from the rapid march of chemistry, and the profound researches of Liebig and Dumas, and viewing agriculture in its alliance with all other natural sciences, he thought that the day was not far distant when its practice would be founded on principles as certain as the laws of mechanics. He looked forward with the pleasure of confident hope, to the almost boundless improvement which the present condition of agricultural inquiry seems to promise. Our limits forbid further details of Mr. Garnett's manner of viewing these subjects; we will only add that all his plans were distinguished by the fitness and simplicity of the means which he adopted for the attainment of his ends.

One of the most remarkable features of Mr. Garnett's character, was the youthful enthusiasm, and freshness of feeling, which he united to the matured judgment of age. This disposition produced a constant activity of mind and body. He was the *mens sana in corpore sano* [a sound and vigorous mind in a healthy body], for regular and temperate habits had secured him vigorous health. He was never weary of well doing, and few days passed over his head, that did not see him engaged in some labor of love for the public good. A more perfectly disinterested and less selfish man never lived, and those, who had the inestimable privilege of catching his last words, can witness that anxiety for the welfare of his country, and love for his honored state, deserted him only with life itself.

He was a man, just and upright in all the relations of life; a husband, who joined confidence to affection; a father, who secured obedience and honor from his children, not by authority, but as the free will offering of their love and admiration; a citizen, whose zeal counted the public weal his own; a gentleman, whose whole life breathed the

spirit of honor and of truth; and a Christian, whose heart and thoughts were fixed on "whatsoever things are true, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report."

We insert Mr. Sotham's letter without other comment than this. Mr. Youatt, in his History of British Cattle, did the Short-horns *more injustice* than the Herefords; for he never went beyond Mr. Berry's pamphlet for his information, and this we pronounce a most meager and unsatisfactory account of this celebrated breed of animals. We have not a doubt but that the Short-horns are as *ancient* a race of cattle as exists in Great Britain. See History and Traditions of Short-horns, p. 161, Vol. I., of American Agriculturist. As to Herefords beating, or even equalling the Durhams, in a single, or collective instance, we leave to the discussion of others. Mr. Sotham has made his statement, let the Short-horn men now make theirs; in the meanwhile, we would like to ask Mr. Sotham to beat the quantity of milk given by Mr. Smith's cow Victoria, see our No. of last month p. 90. When he can do this, he may give the Durhams a hard challenge.

For the American Agriculturist.

HEREFORD CATTLE.

Hereford Hall, near Albany, April 17th, 1843.

Dear Sir: I am exceedingly obliged to you for your kind notice of my stock of Herefords and Cotswolds, and am happy to find that a Short-horn man is free from *prejudice*. All I ask of the public is, to give them a *fair* chance, and I will risk my reputation as a breeder, that the *quality* and *milking* of the Herefords will *prove* all that I have said of them.

When I went to England to select my stock, (which was six times) it was with a thorough determination to procure a part of the "*best*." As they were driven from Northleach to London, they were noticed by many of the first farmers and breeders on the route, and pronounced as good as could be procured in England. As they passed through the village of Ensham, Oxfordshire, the abode of Samuel Druce, Esq., one of the yearly judges at Smithfield, they were detained by him and his friends, for the purpose of examination and strict scrutiny, and you are aware what an excitement is created by a selection of some of the "best" cattle to be shipped to a distant country. However, they were pronounced by them to be "*as good a lot of stock as was ever seen together.*"

These opinions given *candidly*, were gratifying and cheering to a man who had to "*fight*" against an extensive number of Short-horn men, who had established that breed, and written them into favor. All that could be said in the United States *theoretically, critically*, or *ridiculously*, did not shake my belief in the truth of what was uttered of them by *practical men* in England, and those who *well understood what they did say*. Nor did the accusation here, of "stealing" a cross from the Short-horns, make them anything else but *pure Herefords;* they are all, with the exception of Eliza, as pure blood as ever were bred.

These assertions, though *stubborn facts*, may call forth the question of some of your correspondents, but this ends all "*puffing*," for I do not want to say any more of my stock than what absolutely and truly belongs to them; if the animals will not speak for themselves, *it is absurd to exaggerate.*

I saw eleven two-year-old steers in the year 1829, bred and fed by Mr. William Hewer, equal, if not superior, to anything I ever saw of the same age. They were sold at Smithfield the early part of April, at an average of £24 10*s*., or $117. I never saw a lot of Short-horns equal to them, either in weight, flesh, or quality, and I have rode many a hundred miles to view the "*best*" that England could produce. Having been a lover of good cattle and sheep from childhood, I have mingled with the "*best*" breeders, and I have purchased this stock without reference to price, travel, or trouble. If you noticed the number of two-year-olds when at Smithfield market, I will venture to say you met with two Herefords to one Short-horn; if you did not, and dispute the "*fact*," write to either of the salesmen in whom you can place confidence, and he will explain satisfactorily.

As regards stall-feeding, I believe it is generally admitted that the Herefords will pay more for the food they consume than any other breed. Even Youatt, who has written *injuriously* of Herefords, concedes to this opinion, and gives a statement of a *trusty trial* decidedly in their favor. Although his general description of them has *proved a libel*, I do not believe it was done intentionally; he did not write from *practical information*, and was led astray by *spurious breeders*. He had *no idea* of the *value* of this breed when he wrote, or he would not have committed himself in the way he did; for it is well known that the Herefords were superior long before Hubback made his appearance.

Gentlemen may attempt to write down the Herefords as milkers, but when nine three-year-olds, two four-year-olds, and one seven-year-old, will make upward of 60 pounds of butter per week, on cut hay, a little oat-meal, and a half-bushel of turneps, which mine have done, I think they will find it much more easy to *flourish* pens, than "*puzzle*" their heads in finding a like number of Short-horns to compete with them, and they were kept on rye straw and a few turneps, until a fortnight previous to calving. My object is to show which is the "*best*" breed for all purposes. It is my decided wish that the good qualities of each should be *practically* brought before the public, and *friendly controversies* are the only means of arriving at the truth.

My butter has all been sold in Albany (fresh) at 16 to 18 cents per pound, without the least taste of turnep, and my calves have been kept on skim-milk and linseed jelly, one pailful of the latter to four of the former, and I think they will come out next summer in as good condition as those Short-horns that have had the *new milk* of *two* cows, and

the steers will come to market equally quick and heavy. At all events, I am willing to test the matter.

Here endeth the first chapter; you will hear from me on Cotswolds in your next.

WM. H. SOTHAM.

P. S. The bull "Sir George" was the sire of my Sir George, but I think the latter equally as good a bull of his age, and very much resembles him. The former was an aged bull, bred by Mr. John Hewer, near Hereford, whose pedigree and portrait weregiven in the Farmers' Magazine, and the Cultivator.

For the American Agriculturist.

THE SILK BUSINESS, AND REARING WORMS.

MR. EDITOR: It is with the greatest pleasure that I send you the following letter received a few days since. Mr. Gill, the author, is a gentleman of the highest character as a man, and as a *business* man. The document is, in my opinion, more important than anything that has appeared in relation to the silk culture in this country. The letter was written in answer to one from me, stating some facts and reasonings in favor of open feeding, and inquiring in regard to his experience on the same subject. Yours truly,

J. R. BARBOUR.

Oxford, Mass., June 7th, 1843.

Mount Pleasant,
Jefferson Co., Ohio, April 7, 1843.

J. R. BARBOUR, ESQ.—DEAR SIR: I received your circular some months since, and sent you a report of the select committee of Ohio Legislature, containing a great mass of valuable information relative to the progress of the silk business in this region. Also, a letter from myself. I presume they did not reach you, as you do not mention them in your favor of March 24, and pamphlet, which I have received. Your views relative to thorough ventilation are in accordance with my own experience—having been engaged for the past five years in all the departments, both growing and manufacturing. It gives me pleasure to announce to you, that I shall continue to prosecute my labors as heretofore.

During the past year, I have much enlarged my operations, both feeding and manufacturing, and have furnished employment to about fifty hands on an average, the year round; and have manufactured upward of $9,000 worth of silk goods, consisting of all the varieties of staple silk in demand, equal to any imported, and sold them readily as made, at a reasonable advance on their cost of production and manufacture. In fact, my efforts have been crowned with complete success, and I am rapidly and permanently enlarging my operations in all the various departments. In the past five years of my feeding operations, I have frequently met with partial failures, and occasionally entire loss of lots of worms from extremely warm, close, and confined weather, but never from cold. I have tried all the plans of feeding and ventilating cocooneries used or known in the United States. I found they were very deficient in accomplishing the objects desired, viz., cheapness and simplicity of construction, proper ventilation, cleanliness, and economy in feeding. These objects are essential to the success of the business. After testing all the various methods and recommendations for feeding and studying the nature, habits, and wants of the worms thoroughly, I finally studied out and adopted the following plan, which meets all of these important objects. I have sent a model and description to the Patent Office, and expect a patent therefor in a few days. I shall feed extensively on this plan the coming season. I fully believe my invention will work as complete a revolution in the growing of silk as the discovery of the gin did in that of cotton. I have named it Gill's Patent Feeding Tent, and Silkworm Ventilating Cradle. Description:—

The tents and cradles may be constructed of any size and of any materials suitable, keeping in view the principles of construction. I adopt as a convenient size, a tent 15 feet wide, 50 feet long; side posts 4 feet apart, driven in the ground and standing above ground 6 feet high each side; for centre posts 8 feet apart, driven in the ground, and standing 9 feet above ground; ridge and eave poles to be fastened along the top of each of those three ranges of posts or stakes—the tent-cloth to be of linen or any other fabric suitable. It may otherwise be impregnated with paint, tar, or other substance as desired, to give protection from the weather, and to extend from the bottom on one side, over the top and down to the bottom on the other side, with weight poles or rollers at the bottom on each side, so that the tent-cloth may be rolled up or let down, to give free circulation of air, or exclude the same, rain or sunshine at pleasure. The canvass is most convenient in strips 10 feet wide, and side rollers same length. These, when down, to rest against a plank fastened along the two outsides of upright posts. The rollers of cloth, when down, should reach within 6 inches of the ground, and a drain under them to carry off the water. I use the ground for the floor.

The *feeding ventilating-cradles* are constructed to embrace the following principles, and of sizes to suit the breadth of tents, leaving an aisle along one side, and between each cradle. To furnish a tent 15 feet wide, the cradle should have three rockers 4 feet long, made of plank, 15 to 18 inches broad, and about 1 1-2 inch thick, a trough resting across their centres, let in by a notch in the rockers 12 feet long, 1 foot wide, and one end closed,—from the points of the rockers, attach upright posts, 30 inches long, inclined out, and a cap attached to their tops on each side, and parallel with the trough,—to this cap and side of the trough, fasten lath 1-8 of an inch apart, whole length of trough on both sides,—forming when done a rack about 2 1-2 feet deep, and 5 feet wide at the top. Across the trough fasten slats about 1 foot apart, on which to lay mulberry-branches, and on these branches put the worms after their second moulting, or when about half grown, and feed them until they spin, with branches cut about one foot long, with their leaves on. Suspended over each cradle have a *fan* made of bonnet-boards or any other thing suitable, with a pendulum coming down from the shaft which is across the tent, in two of the upright

posts,—this the feeder can put in motion in passing, as also rocking the cradles, thereby removing all impure air about the worms and among the branches, and shaking down all dry leaves, litter, and excrements into the trough, into which occasionally pour a bucket of water at the upper end, and all is washed out at open end, leaving it pure and clean. The motion of the cradle is agreeable to the silk worms, approximating to the waving of the branches when they feed on the tree in a state of nature. Another important advantage is, that no worms can fall through to the ground, and those that happen to fall down in the brush, crawl to the lath sides and mount to the top immediately,—also, the worms readily spin among the clean, bare brush, making but little floss, and seldom ever double cocoons. On the rockers I fix a fender, made of tin or any other material suitable, that entirely prevents mice (the great enemy to silk worms), also, ants and other insects, from ascending to the worms. This system throughout, is simple, cheap, and easy of construction, and meets all the wants of the worm, and greatly facilitates the feeding. It curtails expenses about one half, and more than doubles the quantity and quality of cocoons raised from a given quantity of eggs over the most successful results of the most improved method of feeding heretofore practised. With this tent and cradle, and Dr. Thomas White's patent reel and twister, which Mr. Harris, my machinist, has made perfect, every farmer may raise, reel, and twist silk, with a certainty of a much more profitable return for his labor and investments than in any other of his present pursuits. I authorize you to adopt this system, in your own feeding operations without charge, to show to the feeders in your region what it is. I will sell individual rights at ten dollars each, and county and state rights low in proportion, or I am willing that any feeder should adopt my patent system, and he give me one third of the *surplus* cocoons he raises over the same quantity he can raise from the same amount of eggs hatched and fed in the old ways, or I will give individual rights for three bushels of merchantable cocoons, or two lbs. of reeled silk. Will you take an agency for the sale of rights in your state, and on what conditions?

I continue to purchase the best merchantable cocoons at $4 per bushel—inferior in proportion. Even reeled silk of 8 to 10, or 10 to 12 fibres, $5 per lb.; payable half in domestic silks, half in cash, if desired. Respectfully yours,

JOHN W. GILL.

Remarks.—Mr. Gill's statements as to matters of fact, are entitled to implicit credit. He is a large grower of silk, feeding from more than 30 acres of trees. He is also becoming largely interested as a manufacturer of silk. He has, therefore, the greatest possible interest in adopting himself, and in establishing throughout the country, the *best mode of feeding*. Besides, his high character puts all skepticism as to his statements out of the question.

For two years I have been collecting and publishing facts, all going to establish the great principle on which Mr. Gill's plan is based, viz., *open feeding*, giving your worms heaven's pure air, and all of it. *This is nature.* The worm, in its native state, feeds in the open air, on the tree, exposed to all the changes of temperature like the caterpillar, the canker-worm, and other annual insects. In this state it was found upon the high hills of China, 700 years before the birth of Abraham. In this state it has been found in this country, at least in Maine, South Carolina, and on Mount Holyoke, Massachusetts, 1,000 feet above the level of the Connecticut river.

I repeat the facts already extensively published. *The Chinese feed in open sheds*, and the climate of China, in the same parallel of latitude, is essentially the same as our own.

Six years' experience, and quite an extended correspondence have fully satisfied me that we have much more to dread from *heat* than from *cold.* Hot sultry weather, with no air stirring, is always bad, and in enclosed buildings, with large lots of worms nearly ready to spin, is almost certainly fatal. Hence the advantages of an open shed or tent, and the still further benefit of a local circulation of the air as secured by Mr. Gill's simple contrivance—the cradle and fan.

The expense of such a tent must be small. At the sail-lofts in our seaports, sails too much worn to be used on vessels, can be got cheap. Cotton drillings and negro sheetings, or Lowell osnaburgs, each about 30 inches wide, can be got for 7 to 8 cents a yard by the quantity. A cradle, as described, would take about 60 feet of common lumber, board measure, and a carpenter can make one, rough planed, in a day, or day and a half. A tent 50 by 15 feet would accommodate six cradles 12 feet in length. Each cradle will feed, I think, 15,000 worms; say 75,000 to 85,000 for the tent.

I take it to be essential to this system that the eggs be hatched, and the worm be fed from the *first* in a perfectly natural state of the atmosphere, that is, hatch and feed in an open room until your worms are removed to the tent as directed. It is also essential that it be done the early part of the season, the earlier the better. I have no faith in late feeding in any way. In New England and New York, no worms should be brought out *after* the 20th or 25th of July.

On this system of feeding, the silk culture may be extended indefinitely, and as rapidly as trees can be multiplied. The silk-grower may have tents located in different fields, wherever the soil is most favorable for the growth of the tree.

I have now only to renew the earnest request that silk-growers throughout the country will, the present season, make extended experiments, on a large or small scale, as they may choose, testing the great question involved in this matter. It may be done on Mr. Gill's plan, or any other, so that the essential principles be preserved, viz., *open feeding* from the first. Will editors interested in advancing the silk culture, publish this article? I propose to publish, in pamphlet form, the latter part of August, all the experiments that shall be made on this subject for general distribution. To any editor, therefore, who will publish this article, and send me a paper containing it, and to any person in any of the states or territories, or in the Canadas, who will make an experiment of open

feeding, large or small, on Mr. Gill's plan or any other, and communicate the whole case to me, postage paid, prior to August 15th, I will send a copy of the pamphlet. I say August 15th, because I shall have little confidence in any result brought out after that date. Yet should any late returns come in, they shall be published in the Annual Report of the New England Silk Convention, which will be out in October or November.

J. R. B.

For the American Agriculturist.

SHEEP HUSBANDRY—No. III.

In my last communication, which appeared in your April number, I inquired where is the district of country within the limits of the United States, naturally best adapted for profitable wool-growing? Though my inquiry has not, so far as I have observed, been publicly answered, yet from various private sources of information, I have become satisfied that the best and most profitable sheep districts will be found, *not* in the old northern states (which have heretofore produced most of our fine wool), but in the western and southwestern portions of the United States, and in the upper or *hilly* districts of the *southern* states, where, with anything like decent care and management, sheep can not fail to thrive and do well, and by furnishing in their wool a new, extensive, and valuable article of *export*, will become a source of great income, and will ultimately enhance materially the *value of the land* throughout those districts of country. As bearing upon this subject, I am permitted to extract a few passages from a recent letter of an intelligent gentleman, who is himself an extensive wool-grower in the state of New York. He has travelled extensively in the far west, and speaks from personal examination and actual knowledge. He says:

"There is no doubt of the great capabilities of Illinois, and other new states, for producing fine *wool*. It is not now a subject of conjecture, but is well ascertained and certain. That is the region whence our manufacturers are to derive their great supplies of wool with which to drive foreign competition from our shores, and to carry the war into *foreign* markets. Not only in price of *wool*, but in other products, are the farmers of the *old* states to be brought to the standard of the *new*, and we in the old states can only sustain ourselves by the aids of science, and by *exact economy* and *system* in our husbandry. At the west, theirs will be the advantage of easy and cheap production; while ours must consist mainly in proximity to market. We have, for instance, an advantage over Illinois, of nearly or quite two cents per pound in the transportation of our wool to market, in itself no inconsiderable item; besides, labor and capital are both always dearer in the new portions of the country than in the old. We shall need all the aid of such circumstances to enable us to sustain the competition; and withal we may make up our minds to live under low prices, for we may perhaps never see, under any circumstances, a return to the high prices of a few years since, though I trust we shall recover somewhat in our prosperity, and enjoy a stable and permanent market."

It is now a well-ascertained fact, that fine wool grown in the southwestern part of Pennsylvania, and in the northwestern portion of Virginia, and southern part of Ohio, is of a softer and more desirable quality than such as is now usually produced in the state of Vermont; the latter having a very undesirable *harshness*, and is also often highly objectionable on account of its weather-beaten character, evinced by the extensive prevalence of the "*dead-end*," as it is called, especially among the finer classes of their wool. From these objectionable peculiarities, the fine wool of the region of country first named, is, in some good degree free—so much so that an extensive wool-dealer from one of the eastern cities who is now purchasing, informs me that he is paying a higher price for it by five cents per pound, or say twenty per cent., than for the Vermont wool. That these same advantageous peculiarities also belong to the merino wool produced on the *prairies of the west*, especially when the sheep are well sheltered by sheds from the drenching and beating of the cold rains and storms of winter, I have the assurance of a distinguished and extensive eastern manufacturer. You and your readers will, I think, agree with me that these are very interesting facts.

But let us now, without further delay, turn to my proposed topic, i. e., "the *best and most profitable kind of sheep*." It is, to do it justice, a wide and important subject, deserving and requiring much and careful consideration, which it will well repay. Presuming that your readers would not wish the question adjudged and settled summarily by the mere "*ipse dixit*" of any one, I do not see that we can well do less or better, than to glance first at the *different kinds* of sheep which are now or have been in the United States, and examine in course the merits of the leading sorts. In doing this, let us, in the first place, look at the *native* sheep, so called, as they existed in the country some thirty-five or forty years ago, prior to the extensive introduction from Europe of the Spanish Merino blood. Of those sheep called *native* I once had a flock, of which I yet retain a very distinct recollection, extending even to the individual countenances of each sheep, which I can recal at this day with all the distinctness of yesterday, though it is now about thirty years since.

The native sheep, especially in the northern states, were generally understood to have been, for the most part, of *English* origin, brought over at an early period by the emigrants or settlers from that country. They, however, like the horned cattle of this country, called "*native*," and of similar origin, did not appear to be of any particular breed, and did not possess the distinguishing peculiarities of any of the English breeds of sheep known at the present day.

Indeed, I suppose it may admit of question whether, at the period of the settlement of the English North American colonies, *breed* was strictly attended to, and as strongly and distinctly marked as it has been of late years with the sheep and other domestic animals of England. It can hardly be supposed that the *sheep*, any more than the

horned cattle brought over to this country by the settlers, were all of a strictly homogeneous character; but they were doubtless of the particular race or breed which was most esteemed at the places where the colonists formerly resided, or, in some instances, were perhaps such as could be most easily obtained in the vicinity of the ports from which they embarked. The foregoing supposition would naturally give a considerable variety of sorts. Whatever the fact may have been, originally, it may be safely affirmed that, after their arrival in this country, but little or no attention was paid to keeping and breeding the different races of sheep and other domestic animals, distinct from each other, but they were all mingled and bred promiscuously together, thus obliterating, if they had ever existed (as doubtless was the case, to some extent), the distinctive marks and peculiar form and style of each particular race or variety.

The former sheep of this country, called *native*, were generally, as is well known, of a white color, *very* white, with occasionally a few black, or black and white ones, among them. Though not distinguished for their early maturity, they usually attained a good fair size, and had become so thoroughly acclimated, that they were tolerably hardy. They were often, however, not very kindly to fatten, but their flesh was light-colored, and of *excellent* flavor. Their fleeces were usually somewhat open, and but moderate in quantity, and the quality of their wool coarse, especially on the thighs. The ewes were pretty good milkers and nurses. The rams usually had horns of moderate size, but were not unfrequently destitute of horns. As a race they were not, as a general thing, very docile, and were often addicted to wandering, unruly habits. They are now rare, though, to a small extent, they perhaps still exist *pure* in some remote parts of the country. I have myself recently seen them of undoubted purity of blood, in portions of the mountain region of Maryland. Notwithstanding the capital quality of their *mutton*, the loss of the old native breed of sheep is not to be regretted. In the northern states, generally, they were run out and superseded by crosses of the Merino; giving a far better and more desirable sort, as regards both *quality* and *quantity* of wool, with far more docility and quietness, greatly increased *hardiness*, and but little, if any, deterioration in the size and excellent quality of their mutton.

Some forty years ago there was, in this country, another kind of sheep—a very peculiar and distinct breed they were, too, and, on the whole, a pretty good sort, and in their day held by many persons in high estimation. I will here briefly describe them. They were known by the name of the *Otter* breed. I owned some of this kind many years since. They were distinguished by their short legs and heavy, good-formed bodies, with black or dark-colored faces and legs. Their *fore* legs were particularly short, and so shaped and set on as to give the sheep, when in motion, especially when running, a somewhat *in*-kneed and awkward appearance. They are said to have been an *accidental* variety, obtained or originated in this country, in the following manner. It was alleged that a farmer somewhere in Rhode Island had a ewe which produced him twin lambs, one of each sex, with the above-described peculiarities. Struck with their odd appearance, the farmer, with that love of the *singular* in domestic animals which is said to prevail among the farmers of the northern and eastern portion of this country, saved them from the butcher's knife, raised them, and when arrived at maturity, *bred them together*, and thus fixed and multiplied this peculiar variety of sheep. They were objected to by some few persons, on the ground that the extreme shortness of their legs disqualified them from getting through the deep snows of northern winters, without great inconvenience and suffering. The late Chancellor Livingston was of the number who so objected. That distinguished man, in his Essay on Sheep, with more philanthropy than good sense, as it always seemed to me, expressed the opinion, that to perpetuate the Otter breed of sheep, would, for the reason above-named, be a sin against humanity. I never observed, however, that my sheep of that breed had any difficulty in getting about very comfortably at all seasons of the year, nor did I ever notice but that they enjoyed themselves in all respects quite as well as any of the long-legged varieties of sheep.

One especial excellence was possessed by all the sheep of the old Otter breed, for which they were doubtless indebted primarily to their *short* legs. It was this—they would never climb or run over stone walls; and while their cotemporaries, the old native sheep, were apt to be very unruly, as regards fences, the Otter breed were not at all so, but just the reverse, the most quiet and docile race of sheep that I ever saw. As regards walls and fences, their successors, the Merinos, are about equally good; for, among my Merinos, I never knew an unruly sheep, unless with a cross of native or other blood, or educated to bad habits by the evil example of the natives or other low-bred sheep. As might have been expected from their quiet disposition, the Otter breed had more of a tendency to fatten than the old native sheep, while the quality of their mutton was equally good, their fleeces somewhat closer, and their wool not quite so coarse; but still it was a wiry, harsh, dry wool—very much like the English South Down wool of the present day.

It did very well at that period for the domestic uses of the farmers' families, and also answered for making flannel or cloth, which, when passed through the fulling mill, well dyed, and finished at the clothier's, was at that time considered quite decent, and even handsome, but which the taste of the present day rejects as being coarse, and especially as being destitute of the *softness* of touch or feeling that is peculiar to the Merino wool in all its varieties, and which seems strictly confined to that race of sheep, unless it may have been borrowed or transmitted in some degree to others, by crosses of that blood. As to the story of the *origin* of the Otter breed of sheep, I do not vouch for its authenticity, but give it as I received it. In whatever way they originated, I am well satisfied that their peculiarities were not very recent; but

that they had somehow acquired great fixedness of character, or, in other words, *strength of blood*. This was evinced by their close *uniformity* of breeding, as well as by the fact that, when bred or crossed with other kinds of sheep, their own peculiarities proved to be not only transmissible, but were found to predominate, and to be strongly impressed on the progeny. On the introduction of the Merinos, the ewes of the Otter breed, like the best of the natives, were crossed with Merino rams, and thus, with the occasional aid of the butcher, the Otter breed of sheep was extinguished. They have probably, long ere this, totally disappeared from the country. I have met with none of them for many years past, though I have since not unfrequently seen their places occupied with worse sheep than themselves.

We have now arrived at the period when the native and Otter breeds gave place to the MERINO, the large and choice importations of which, from Europe, upward of thirty years since, supplied us with the best, hardiest, and *most profitable* breed of sheep which this country or the world ever saw. But this portion of our subject is entitled, by its importance, to more of our consideration than your space will at this time allow, and it must accordingly be the topic of a future communication.

May, 1843. AMERICUS.

We need not say to the author of *Sylva Americana*, and other well-known works, that a continuation of his letters upon Cuba will be particularly acceptable. Notwithstanding its contiguity to us, and the frequency of its being visited, we scarcely know of a good work having yet been written upon its soil, climate, agriculture, commerce, scenery, and inhabitants. We hope that our correspondent may be induced to set himself about a thing of this kind. No one is more capable than himself, and we are confident the book would have a good sale. We think we can easily find him a publisher if he will undertake it.

For the American Agriculturist.

THE AGRICULTURE OF CUBA.— No. I.

Puerto Principe, May 10, 1843.

DEAR SIR: I herewith send you a short sketch of the agriculture of this section of the island, which may be interesting to a portion of your readers; and, should it prove acceptable, at a future time, I can furnish you with an account of the product and manufacture of sugar, and of the rearing and management of the honey-bee, as practised here.

Of all countries connected with the New World, from whatever nation its inhabitants may have originated, or under whatever form of governments they may exist, the island of Cuba stands pre-eminent for its constant and uninterrupted increase of wealth and prosperity. Laboring under the disadvantages of a despotic government, with no means of internal communication except by roads almost impassable, and more recently a few railroads, we find she possesses a flourishing commerce, based almost exclusively upon her agriculture, and nearly exempt from those periodical revulsions which have so often prostrated the affairs of the rest of the civilized world.

In this district, that is, the Intendencia of Puerto Principe, a greater portion of the land lies in a state of nature, and the chief branch of agriculture, is the rearing of cattle for domestic consumption. It is not uncommon to see here *potreros*, owned by one family, containing twenty or thirty square miles of land, with a stock of 10,000 or 15,000 head of cattle, valued, when fully grown, at $10 or $15 each. The cattle are almost entirely of the old Spanish breed, although some recent attempts have been made to introduce British and American stocks. But little care is required in rearing the cattle after they are one year old; it being only necessary to guard the calves against the attack of wild dogs, and see that they have a proper supply of wholesome water to drink. The forage of the cattle consists chiefly of a species of coarse wild grass, the boughs of trees and shrubs, and what is particularly valuable and nutritious is the leaves, bark, and fruit of the *Guacimer*, a tree somewhat resembling in its qualities the American slippery elm (*ulmus rubra*). It is said that the fruit of this tree, which is full of mucilage, affords more nourishment to cattle than the same weight of corn. Working oxen are mostly fed on maize, millet, sugar-cane, calabashes, and a species of Guinea grass (*Yerba de Guinea*), lately introduced. It is believed that this species of grass can be cultivated to advantage in Florida and the southern states of the Union.

Although agriculture forms the most important branch of industry among all classes of society, yet, with few exceptions, all the processes employed in preparing the ground, planting the seed, and gathering the crops, are slight and simple. The only plow adopted by the Cubanos is the same rude instrument as is used in Spain; constructed entirely of wood, except a small iron point or coulter, which just serves to scratch and break the surface of the earth, and is put together in the roughest possible manner. It is drawn by one or more pair of oxen, and but little effort is requisite to keep it down.

Few inducements are held out by the Spanish government for improvements of any kind, and the people here possessing, in general, that natural languor of mind which characterizes nearly all the inhabitants of tropical climates, and an hereditary aversion to the introduction of modern inventions, do not advance one step beyond the modes that have been adopted for centuries. Unfortunately their disposition and enterprise do not correspond with the advantages which nature has lavished on these regions. Possessing, as they do, a soil of unbounded fertility, and a climate susceptible of growing a succession of crops of almost every product of the temperate and torrid zones, they will not exert themselves beyond that state which nature renders productive.

In addition to the three great staple products, sugar, coffee, and tobacco, the various garden vegetables which are common in temperate latitudes, are raised, and most of the fruits peculiar to tropical climates. The orange, the plantain, and the

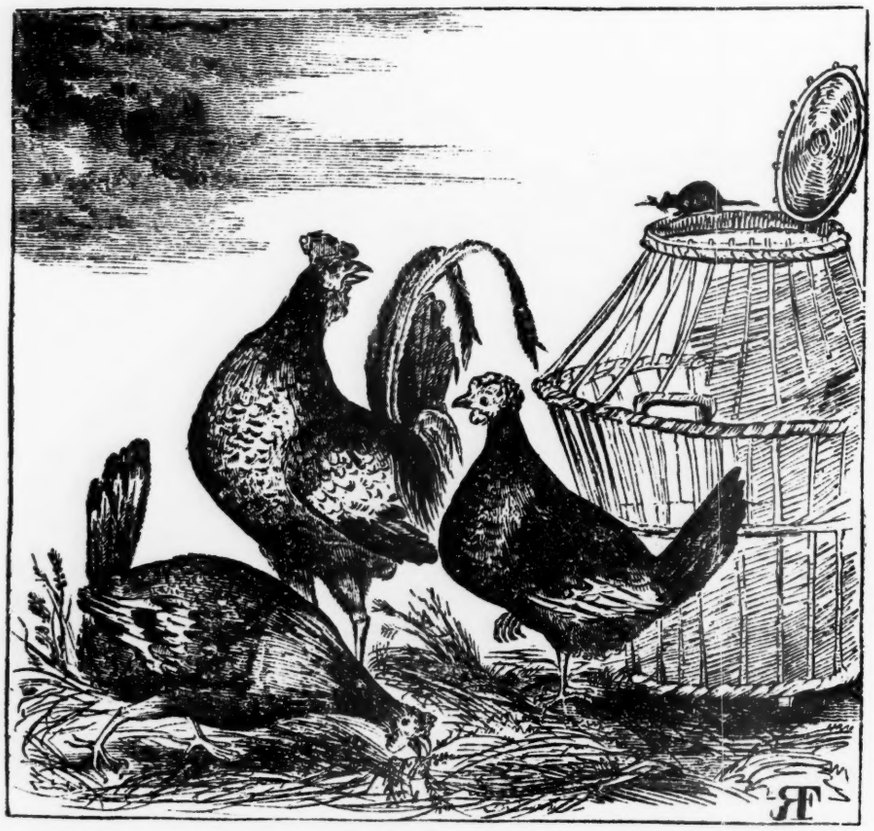
sugar-cane are perpetual in their growth, and when once planted, will continue for half a century and yield a crop every year. Tobacco is cultivated in great abundance, and of the finest quality in the world. Three or four crops are gathered a year from the same stalks, which renders the business doubly profitable to its cultivation in the United States. Two crops of Indian corn are raised in a year from the same ground, with no other cultivation than preparing the soil, planting the seed, and gathering the crop. By the ordinary mode of culture, an acre of land will produce about twenty bushels. An experiment was made in this neighborhood, however, the year past by an Irish farmer, who adopted our northern mode of tillage, and he produced six hundred bushels from twenty acres of ground. The ordinary price of corn here is about $2 per bushel. When our northern corn is planted here, the character of its product becomes somewhat changed. The ears are not one half of the length they usually have in the United States, and they are thickly clad with husks. They are so rapid in their growth that they are fit to boil or roast only for a few hours. Some of these peculiarities may account for the scanty crops produced on the island.

Another considerable source of industry here, is the culture of the *yucca*, which is manufactured into *cassavi*, and substituted for bread among all classes of the inhabitants. Although a deadly poison in the crude state, the roots and stalks of this plant, when rasped into a pulp, formed into discs or cakes about two feet in diameter, and one-fifth of an inch thick, and then roasted or baked, become a wholesome article of food, resembling bread in its character, and is of great importance in the economy of this island. But what is of still more importance, and upon which nearly all the lower classes depend for their chief support, is the plantain. It is boiled, roasted, or cooked in a variety of other ways, and is often eaten raw. It is preferred by the colored population to bread, and appears to be equally wholesome and nutritious. It is often eaten by the higher classes as a substitute for potatoes.

Many of our garden vegetables become changed in their character when cultivated here. For instance, the tomato does not grow to one fourth of the size that it does at the north; but this deficiency is made up in the richness of its quality. The onion thrives well, but it loses nearly all of its acrid taste and becomes sweet. Hence the people here prefer the northern onions to season their food. The potato grows small and watery, and runs mostly to tops, and is but little cultivated. Sweet potatoes (*bonatos*) grow in great abundance, and are of a fine quality.

D. J. BROWNE, *Civil Engineer.*

DORKING-FOWLS.—(FIG. 26.)



The Property of Francis Rotch, Esq., Butternuts, Otsego Co., N. Y.

WE here give a cut of a group of Dorkings, from the pencil of a gifted amateur, and we hope that he will pardon our publication of his little explanatory note accompanying it. As for the engraving,

we have done the best we could in the city. We wish we had a good animal painter here, one who could faithfully cut after his own sketches. He would be sure to make a fortune in his business, for now many are deterred from getting things done, because they are made caricatures of rather than portraits. For full accounts of the Dorking-fowl, we must refer the reader to our first volume.

For the American Agriculturist.

DEAR SIR: Above you will see what sort of a poultry court I have sent you, and if you will only make the engraver stick to my lines, you will have some good Dorkings. The right hand hen is from the pullet you brought me from England, and the left hand bird is that noble brown hen that came with her. The cock is the one your brother L. F. sent me, so they are actual portraits. Be particular in your cut to keep the legs entirely white, and do not forget the extra toe. I have stood a poultry basket in one corner, by way of showing our market-men how to carry fowls to town.

F. R.

Butternuts, May 23d, 1843.

For the American Agriculturist.

COW PASTURES.

IN settling a new farm or putting buildings upon an old one, place your barn so as to have a lane run from it through a track of pasture land, fenced off into lots of 10 acres each, into which a gate opens, so that the cows may pass in and out at pleasure, the water being accessible in the barnyard, under the cow house: if in the pasture so much the better. When the feed is eaten off in lot No. 1, that gate is closed, and No. 2 is opened, and so on to No. 10, which includes the 100 acres appropriated to cow pasture; then commence with No. 1, and go through again. A small child or a tractable dog may soon be taught to bring the cows; and many days of a man's labor saved during a summer, that must otherwise be spent in driving cows to and from pastures: another advantage is, the cows have always fresh feed.

S.

June 6th, 1843.

WE are quite obliged to Dr. Philips for his report of the State Show and Fair at Jackson; but we never heard of measuring milk by the *bushel* before. Thanks to the spirit of agricultural improvement in Mississippi, we fancy that they are getting milk now by the *cart-load*, where, a few years since, with their poor stock, they were almost in a state of starvation for the want of it. We answer the question, of "how many *wet* quarts in a bushel?" by saying, 32, beer measure. A bushel and two quarts, therefore, would make Mr. Tucker's cow produce 34 quarts. When a big story is to be made up here at the north, or in England, of the quantity of milk given per day, the wine measure is used, which being within a fraction of one seventh less than beer measure, would make Mr. Tucker's cow yield nearly 39 quarts, which beats Mr. Smith's Victoria (see June No. of current Vol., page 90) a trifle over four quarts. But pray, Doctor, had the bushel measure been *gauged* under oath? Was the milk *strained* before measuring, or do you include 5 to 6 quarts of *froth?* Come, sir, take the stand if you please now, and answer; for we have no idea of being beaten by the south in the matter of milking, and be obliged to surrender our *creamy* laurels without first having a little good-natured cross-questioning. To give the weight of milk is the best test, as measures are apt to be of the size of a "piece of chalk."

For the American Agriculturist.

STATE FAIR OF MISSISSIPPI.

Log Hall, Miss., June 4th, 1843.

I am unable to enter minutely into a detail of our Fair. I was engaged pretty constantly, either in the business proper of the society, or in answering questions, or in talking. The spirit evinced by the large assemblage of individuals of both sexes, the interest they took in examination, the busy moving officers of the society, and the smiles that beamed on the countenances of the warm friends of this measure, all speak in glowing language that we have commenced.

I should judge that there were full 1,000 persons on the ground, busy moving to and fro, from one portion of the exhibition to another, as bees from the hive. The stock shown was highly creditable to us, who have so very recently made a commencement in this department of agricultural improvement.

In horses, there was Gloster, a stallion of no ordinary pretensions, in all the pride of his native state, Virginia, of high pedigree and great finish. He took the 1st premium last year, and was therefore excluded this year. Owned by C. S. Morris. There were some five other stallions on the ground, and at least eight to ten more within a day's travel that were not there. There were also several fine blood mares; two-year-olds, yearlings, and colts; jacks, mules, and mule colts; and had the season been more favorable to farmers, there would have been more than double the number; there being in this region of the state quite a number of thorough-bred horses, and some very promising young stock.

In the cattle department, we must give to our friend C. S. Tarpley, the credit of having the two finest animals we know in the state—his imported white cow, and his heifer, now in milk, whose finely formed and capacious udder, with widely-standing pins, gives promise to her fair mistress, that she must make, with good care, an animal worthy of her kind treatment. A cow was exhibited by M. R. Tucker, of the grade Durham, that on your pastures, and with your feed, would

go her 35 to 40 quarts per day; on our own fare (in Madison county), she gives *one bushel and two quarts per day;* so I was assured by those who knew, and who would not falsely state the quantity. Mr. Tucker also exhibited a beautiful heifer of about two years of age, that richly deserves more than a passing notice. Mr. E. Moody's bull, though not really a No. 1, would be a good bull almost anywhere. I must think him the best bull I now know in Mississippi. I had 3 Devons there that were scarcely noticed, but had they travelled them alongside of the Durhams, they would have attracted attention.

I come now to sheep, and must, after seeing the sheep exhibited by J. Brown, of Madison, excuse him for bragging—not a little—on his Saxons; though I can not go the full sheep in thinking them equal to any in the Union; yet I think they would be hard customers for H. D. Grove himself. Mr. B. exhibited a pen-full of different sheep, all good of their kinds, and his mutton, that I saw at the butchers, as also his present for the dinner, *looked* all my fancy painted it; but as I was mixing about when dinner was served, I only saw it.

But in the swine line, I was *there*. The lady Gipsey, I am vain enough to say, stood "solitary and alone, the observed of all observers." And not unworthy of their dark dam, were Marian and our Lida—though Ellen Beach took the premium on young sows; yet, owning both, we would not give Marian for her. Our friend C. S. Tarpley had the misfortune, on the morning of the Fair, to lose his brag boar. He would have been an "ugly customer" to even the premium boar, Mr. B. S. Ricks's, Sambo; though he is plenty good for such as myself. There were too many good hogs to specify all; yet I must say of the sow exhibited by J. S. Johnston, that if Gipsey did beat her, yet she is "hard to beat in any crowd;" and were Gipsey out of our state, I know not whether she could be; for we have a number of fine specimens, particularly in the piggeries of Charles Allen, James Elliot, J. B. Peyton, C. S. Tarpley, &c., &c.

In the implement line, the neatest article I saw was one of James Murray's corn and cob grinders, exhibited by myself. Not having proved its value, I can only say, it is a very neat article of mechanism, and must work well. The next, I know not whether to say stood a plow, made by that choice workman, Mr. Bolls, of Warren, or a wagon, made by an excellent workman at his business, in Jackson. I exhibited Barnaby & Mooer's side-hill and level-land plow; and probably no one article attracted more remarks, especially from "the darkies." It is too heavy for less than two yoke of oxen, for certainly no one span of horses could live and keep before them; or, in the language of a friend of the Emerald Isle, "do it and keep healthy." A corn-sheller, exhibited by Israel Spencer, was a great curiosity with many. I can out-shell it with one of Goldsborough's, and give it "a quarter in the mile." His has shelled one bushel in two minutes, and ours, *in one*. I saw the same kind, I think, over twelve months since, at J. B. Peyton's, though I question not but Mr. Spencer invented his, and guaranty it was made at home, it having the flesh mark of tools not very sharp.

In the domestic fabric department, it would take a whole sheet to particularize. The ladies exceeded themselves. They are all No. 1, and all deserve immortality; and could my pen write every name that exhibited, so it might be preserved as a lasting memorial of their patriotism and industry, I would most cheerfully do it; but as each and every one deserves far more than I can say, I must be excused from adding more.

The "*Greasy*" committee, in being pleased to give our "gude dame" the spoons for her butter, pleased me as much as any part of the whole business. Her attention and personal labor were fully recompensed.

I had no idea that we Mississippians could have in so short a time made such an exhibition of skill and handy-work. I was prepared to see the stock; but not so, ladies and mechanical skill. Among the former, were specimens of silk, cocoons, laces, bed-spreads, &c., &c., that might be shown with credit anywhere in the world.

Yours, truly, M. W. PHILIPS.

For the American Agriculturist.

THE BEST DISTRICT IN THE UNITED STATES FOR SHEEP-FARMING.

Prospect Hill, Ky., May 1st, 1843.

In the first number of the second volume of the American Agriculturist, there is an inquiry as to what district of country in the United States is "naturally best adapted for *profitable* sheep-farming." The writer truly suggests, that sheep husbandry will meet with great obstacles throughout all the prairie country to the west, in consequence of the great expense and trouble of feeding their flocks for about *five months* of every year. He supposes there must be somewhere in the United States, a region where, while it is cool enough in summer to be a grass-growing country, the winters are so short and mild that sheep would not require much, if any feeding, at all events for any great length of time. He remarks, "if there is such a region, that is the country for *sheep*, and *there* is the place where *wool* can be grown *at least cost*, especially if the land be cheap. If the country is hilly or mountainous, so much the better; or if dry, sandy, or rocky, none the worse. Only, let it not be sunken and wet land, for such will not answer for sheep pasturage." The writer (Americus) asks, "Where is such a country?" and desires to obtain the information through the medium of the American Agriculturist.

I would respectfully inform him, that a region of country, very accurately answering the above description, may be found in the eastern part of Kentucky, bordering on the Virginia line, and extending from the Ohio river, between the mouth of Kinniconick and the mouth of Big Sandy to the Tennessee line, latitude 36 degrees 30 minutes north. This region of country extends from north to south about one hundred and fifty miles, and its average breadth from east to west, is about fifty miles; it therefore contains 7,500 square miles, and 4,800,000 acres. By looking at the map of

Kentucky it will be seen that only a small portion of this region of country lies north of 38 degrees 30 minutes, and extends to 36 degrees 30 minutes, the dividing line between Kentucky and Tennessee. While, therefore, the climate is sufficiently mild for sheep husbandry, the whole region lies within the grass-growing district. It is watered by the Great Sandy river, and the head branches of Licking and Kentucky, and by three considerable streams, falling into the Ohio, which take their rise between Great Sandy and Licking rivers, viz., Little Sandy, Tigut, and Kinniconick. The country is truly "a hill country," and becomes mountainous as you approach the extreme head branches of Licking and Kentucky rivers. But the valleys formed by the various streams above mentioned, afford fine lands on their rich bottoms or flats. These are well adapted to the production of Indian corn and other grain, and the various root crops. The hills are generally what are termed oak land, and, though not such as would be considered rich in Kentucky, are capable, when cleared, of producing excellent blue grass. Pea vine grows very luxuriantly in a state of nature, and affords a fine, natural pasture during the summer and fall months, and the latter part of spring; and the residue of the year sheep could be subsisted chiefly upon cultivated grasses, with the addition of hay and roots, or a little corn for a month or two, during the severest part of the winter. In mild winters sheep may be sustained entirely on blue grass, even in the most northern part of the above-described region of country, provided a sufficient quantity has been reserved for winter feeding.

The price of land, in the hill region, is as low as could be desired. Any quantity can be purchased from ten to fifty cents per acre. If there is bottom land attached to the hill land, the price will be enhanced in proportion to the quantity and quality of the bottom.

The chief difficulties to be encountered in practicing sheep husbandry in this region of country, will be the following:—

1. Clearing the land, and setting it in blue grass.
2. Providing winter food for sheep for one or two months.
3. The danger to the flock from wolves.

The clearing of land, and sowing it for meadows and pastures, is the greatest difficulty. This operation may be much facilitated by adopting the Kentucky plan of cutting out only the small growth, and sowing the woodland in blue grass, where the soil is suitable for pasture; or by deadening or girdling the large timber, where meadow is intended to be made.

The providing of winter food could be best accomplished by having some rich bottom land attached to the sheep farm for raising grain, roots, &c., or a detached farm in the interior, whither the sheep could be driven when the pastures in the hills shall have failed.

The danger from wolves could be guarded against by having a shepherd, and some faithful shepherd dogs to accompany the flock in the daytime, and by herding them at night in enclosures secured with such lofty fences as would keep out the wolves, or at least deter them from risking themselves on the domain of the shepherd dogs.

The period is not distant, when we shall manufacture every article in the woollen line, which is essential to our wants, and probably many for exportation. This period will be hastened by the very low price at which wool is now selling. The greatly cheaper rate at which we can afford to produce wool, will soon enable our manufacturers to banish European competition, and consequently the *home market* for the raw material will not only be greatly enlarged, but will become more steady, and afford better prices. When, in addition to this, we take into consideration our rapid increase of population, progressing at the rate of thirty-three and a third per cent. every ten years, we can not fail to perceive that the demand for wool will increase very rapidly. The capacity of the country, for supplying this very valuable raw material, is almost unlimited. And no branch of agriculture in this country promises a fairer remuneration than sheep husbandry. If the enterprising Vermonters have found it profitable, where the severity of their winters requires that their flocks should be fed nearly half the year, how much more profitable would they find sheep farming in a region where sheep could be kept almost the whole year upon grass alone? But my object is to give the desired information, not write an essay on sheep-husbandry, and I must therefore conclude.

A. Beatty.

For the American Agriculturist.

CULTIVATION OF MADDER, AND DYEING—No. III.

There are some facts relative to madder equally interesting to the cultivator and to the consumer. I think it necessary that these facts should be clearly understood by every person interested in madder, dealers, as well as cultivators and colormen.

There is a great want of some paper issuing from the city of New York, as a vehicle by which new facts in the materia tinctoria can be made known throughout our country. I can see no objection why your paper should not be the proper vehicle for this purpose. The price can be no objection to the poorest artist in our country, and as agriculture would be essentially benefited by bringing to the notice of the consumer all new articles raised by our farmers, both parties would soon become equally interested. The facts I shall make known in this article will be worth to any dyer twenty times the annual cost of your paper, and should our dyers generally take it, I can promise to give them, from time to time, other facts equally important.

The object of this essay is to point out to our agriculturists the effect peculiar soils have on the quality of madder, and to our dyers the effect different waters have in developing the coloring matter, affecting its brilliancy and permanency.

The following is transcribed from A. Ure's late work on arts, manufactures, &c.: see madder, page 791.

"Madder contains so beautiful and so fast a color, that it has become of almost universal employ-

ment in dyeing; but that color is accompanied with so many other substances which mask and degrade it, that it can be brought out and fixed only after a series of operations more or less difficult and precarious. This dye is besides so little soluble, that much of it is thrown away in the dye-house; the portion supposed to be exhausted being often as rich as other fresh madder; hence it would be a most valuable improvement in this elegant art to insulate this tinctorial body, and make it a new product of manufacture.

"Before the time of Haussmann, an apothecary at Colmar, the madder bath was subject to many risks, which that skilful chemist taught dyers how to guard against, by introducing a certain quantity of chalk into the bath. A change of residence led Haussmann to this fortunate result. After having made very fine reds at Rouen, he encountered the greatest obstacles in dyeing the same reds at Logelbach near Colmar, where he went to live. Numerous trials, undertaken with a view of obtaining the same success in his new establishment, proved that the cause of his favorable results at Rouen existed in the water, which contained carbonate of lime in solution, while the water of Logelbach was nearly pure. He then tried a factitious calcareous water, by adding chalk to his dye-bath. Having obtained the most satisfactory results, he was not long of producing here as beautiful and as solid reds as he had done at Rouen. This practice became soon general among the calico-printers of Alsace, though in many dye-works the chalk is now replaced by lime, potash, or soda. But when the madder of Avignon is used, all these antacid correctives become unnecessary, because it contains a sufficient quantity of carbonate of lime; an important fact first analytically demonstrated by that accurate chemist M. Henri Schlumberger of Mulhausen. Avignon madder indicates the presence of carbonate of lime in it, by effervescing with dilute acids, which Alsace madder does not.

"M. Kuhlman found a free acid resembling the malic, in his analysis of madders. But his experiments were confined to those of Alsace. The madders of Avignon are on the contrary alkaline, as may be inferred from the violet tint of the froth of their infusions; whereas that of the Alsace madders is yellowish, and it strongly reddens litmus paper. This important difference between the plants of these districts, depends entirely upon the soil; for madders grown in a calcareous, shelly soil in Alsace, have been found to be possessed of the properties of the Avignon madder.

"The useful action of the carbonate and the phosphate of lime in the madder of Avignon, explains why madders treated with acids which remove their calcareous salts, without taking away their coloring matter, lose the property of forming fast dyes. Many manufacturers are in the habit of mixing together, and with advantage, different sorts of madder. That of Avignon contains so much calcareous matter, that when mixed with the madder of Alsace, it can compensate for its deficiency. Some of the latter is so deficient as to afford colors nearly as fugitive as those of Brazil-wood and quercitron. The Alsace madders, by the addition of chalk to their baths, become as fit for dyeing Turkey-reds as those of Avignon. When the water is very pure, one part of chalk ought to be used to five of Alsace madder, but when the waters are calcareous, the chalk should be omitted. Lime, the neutral phosphate of lime, the carbonate of magnesia, oxyde and carbonate of zinc, and several other substances, have the property of causing madder to form a fast dye, in like manner as the carbonate of lime.

"In a memoir published by the Society of Mulhausen, in September, 1835, some interesting experiments upon the growth of madders in factitious soils are related by MM. Kœchlin, Persoz, and Schlumberger. A patch of ground was prepared, containing from fifty to eighty per cent. of chalky matter, and nearly one fifth of its bulk of good horse-dung. Slips of Alsace and Avignon madders were planted in March, 1834, and a part of the roots were reaped in November following. These roots, though of only six months' growth, produced tolerably fast dyes, nor was any difference observable between the Alsace and the Avignon species; while similar slips or cuttings, planted in a natural non-calcareous soil, alongside of the others, yielded roots which gave fugitive dyes. Others were planted in the soil of Palud, transported from Avignon, which contained more than 90 per cent. of carbonate of lime, and they produced roots that gave still faster dyes than the preceding. Three years are requisite to give the full calcareous impregnation to the indigenous madders of Avignon."

It appears to me, from the above-stated facts, that the highly beneficial effects of calcareous soils on madder, is owing to the oxygen furnished to the plant by the carbonic gas so abundant in such soils; or why should oxyde of zinc answer as well as the carbonates in raising the dye in the kettle, and making the color permanent?

Our farmers will observe that lime-stone soils are the best for madder, and that it can not be too highly impregnated with carbonaceous matter. In such soils two years will be all-sufficient time to raise a crop.

WM. PARTRIDGE.

For the American Agriculturist.

RAISING PORK.

Buffalo, April 22d, 1843.

The astonishing demand that has been created within the last 12 months for pork, to be used in an unexpected and entirely new mode, will hereafter make it a great object for our farmers, particularly those at the southwest where corn is abundant, to raise large numbers of hogs. Chemists discovered many years since, that lard and tallow are composed of two distinct principles; one, a firm, adhesive, compact substance, resembling spermaceti obtained from the sperm whale, which is called *stearin;* the other, a fluid substance, resembling winter-strained oil, which is called *elaine.* Although these substances have been known for a long time, it is but recently that the discovery has been applied to the manufacturing of them from lard to any extent. Scarcely one year has

elapsed, since its introduction into anything like a regular business, and its successful prosecution within that short period has been so great, that its permanent and rapid extension hereafter, may be looked for with absolute certainty.

We have not the data at hand to show the amount of consumption of pork for this purpose the present season, but its comparative use for this object may be indicated by the fact, that of the 250,000 hogs slaughtered in Cincinnati last winter, at least 80,000 have, with the exception of the hams and shoulders, been converted entirely into lard. At almost every other point where extensive pork-packing has been done, a similar use has been made of the animal, though perhaps not so large a proportion of it has been devoted to this purpose. After cutting out the hams and shoulders, the entire carcass is placed in a tub having two bottoms, the upper one perforated with numerous small holes, over which a cover is made perfectly tight. Into this, steam at a high temperature is admitted, and, in a short time, all the lard is extracted, and falls to the lower bottom. What remains is the muscular portion and bones. The skin is sometimes taken off before subjecting it to this process, from which all the adhering fat is easily scraped, and it is then tanned, and makes a valuable leather. The bones are converted into animal charcoal, valuable for various purposes in the arts, and is worth about three cents per pound. In addition to the immense consumption for the purposes of manufacturing into oil and stearin, lard is a profitable article of export to England, France, and various parts of the world. By the diminished rates of duties now charged on pork and lard in England, they have already become a large item of export from the United States into that country; while the renewed activity recently given by our late tariff to our own manufactures, will increase the consumption of pork and its products to a large extent at home.

What then is the interest of our farmers who are situated in the corn-producing region, remote from markets? Certainly no one article of ordinary production promises so large and so certain a return as the raising of pork, *provided they procure and use the best improved breeds.* It is found that ordinary fatted pork, manufactured according to the above process, will yield 55 per cent. of lard from the whole carcass, after taking out the hams, while the best class of improved animals, the China and Berkshire, will yield 70 per cent.; an increase of 15 on 55; or nearly 28 per cent. This is a difference between a choice breed and an indifferent one, that to an extensive pork-producer, will make a large sum yearly; and for the whole Union, will yield an immense amount in favor of the improved hog. It is estimated by the returns of the census for 1840, that there were over 26,300,000 swine in the United States, and reckoning the increase at 6 per cent. per annum, we shall have 24 per cent. added to the above as the present number of swine, or, over 32,600,000. If we reckon each animal to be worth $3 at one year old, we have the astonishing amount of nearly $100,000,000 value, annually produced in pork alone in the United States. The difference between the improved and common breeds, above estimated at 28 per cent., will give us, then, as the annual gain, by substituting the former for the latter, nearly $28,000,000, a sum sufficient to liquidate all the suspended state debts in the Union, within three years. This difference should not be abated in the relative value of the two breeds when used for any other purpose, as there is quite as much, if not more, increased value in the best when used for the table; and it will be vastly augmented, if we take into the account the larger consumption of food required to put the same amount of flesh on to the common hog, equal at least to 28 per cent. more. It is easy to see what an incredible saving may be annually made in a single item of our agricultural products.

R. L. A.

For the American Agriculturist.

CULTIVATION OF COTTON.—No. 3.

Log Hall, Miss., June 11, 1843.

In my last, I gave my plan of sowing, I now give that of cultivating the plant; and as our technical terms may not be understood at the north, I will commence by explaining them, and the implements I use.

Scraping cotton (it is termed *shaving* by tobacco-growers) is merely taking off with a hoe the surface of the hill or bed, so as to leave a clean surface; unless this be done well, whether grass or weeds be in sight or not, there will be a quantity of them before the crop can be worked over again.

A *bull-tongue*, or *scooter* plow (not a "hill" or "bill-tongue" as I am made to say by some prints) is about 4 inches wide, shaped somewhat like the shovel plow, and used on the same stock. I use a *narrow shovel* about 6 inches wide, also a shovel of the usual width; the first is used when the crop is young, likewise the bull-tongue. The *harrow* is a triangular frame of white oak, 3 by 4 stuff, with 9 iron teeth, straight, 12 inches long, and made of 3-4 inch square bars.

The sweep is the same described by Dr. Cloud, though I prefer the semi-circular shape thus, be-

(Fig. 27.) (Fig. 28.)

Cotton Sweeps.

cause it is not so liable in striking a cotton-stalk or stick, to glance off and injure the cotton; it should be made with cutting edge level, and laid with steel, the back edge raised so that when the earth falls over, it falls to pieces; the plowman should carry a file, and be required to keep the sweep sharp.

The *cultivator* you know, far better than I can describe.

The *double shovel* is a plow with two moulds; I prefer the moulds of a parallelogram shape, and twisted so as to throw the earth all one way, see

a cut of the stocking of one, in Vol. II., old series, of the American Farmer, for Sept. 1, 1820.

The *scraper* is an implement I have tried to have constructed, so as to shave off the bed each side of the cotton plant, leaving 4 inches or less of the former surface for the hoe-hands to clean. I think the difficulty in those formerly used was, want of weight to steady them.

Our usual scraping is after the plow, then a turning plow goes ahead with the bar next to the row, throwing the earth from the plant to the middle of the row, and in consequence of having to run 2 or 3 inches deep, we dare not run near the plant, owing to the bed crumbling down, and the danger of covering the plant, by the earth falling from the plow. I am as particular in this part of our labor as is possible, superintend in person all the day, requiring of the hand to chop through the row, leaving one or more stalks, and cleaning the side of the plants next to hand, then another stand, of a stalk or more and so on, thus leaving cotton-plants about the width of the hoe apart; if the same hand cleans the whole row, he will come back on the other side, cutting up all but one stalk in each bunch, and cleaning the row next him as before. I usually put two on a row, the best hand chops through the row on his side, the other reduces to a stand a single stalk, and cleans the remaining side; I have now really a double stand, that is, twice as many stalks as I design to remain, thinking it prudent not to reduce to a stand, as casualties and carelessness may by chance destroy a stalk or two; and being not over 2 or 3 inches high, and 10 to 12 inches apart, they do not injure each other. When I use the scraper, there is so little hoe-work, that each hand is required to clean the row at one time, by chopping through to himself, sweeping off the side of the plants, then with a push of the hoe he cleans the opposite side of the stalks, and reduces to a single stalk at the same motion. Our usual work is 3-4 of an acre per hand; but with the scraper and earth in the same condition, from one to one and a quarter of an acre is as easily done, this is when the crop is got into in due time, which I make a point of doing as soon as I have what I consider a full stand up, never waiting for height or age of it, and only when too cold. On referring to my farm-book, I find I commence reaping from 15 to 20 days after sowing, owing to the season, and whether earlier or later sown; if the seed be sown early, it is the longer period, the earth being cool, and the sun not powerful enough at this season to warm it.

As soon as I can return for other business, say in 10 to 15 days at the outside, I throw earth to the plant with the bull-tongue plow, running near and deep, and with any ordinary attention the plant is moulded well with fine, light earth; the sooner this can be done the better, the light earth serving to protect the stem of the plant, the furrow to drain off moisture and loosen the earth, and to give warmth. The plant being thus stimulated, if the weather be not too cold, will resume its green color if it has turned yellowish, and commences growing; the last half of cotton requiring working, and if rain falls about this time, it may not be possible to get into it earlier than 10 days, but at all events we should do so, some 5 days before hoe-hands go into it to clean with the hoe. The hoe follows this moulding with the bull-tongue, levels the earth around the plant, and cuts up what grass and weeds there may be present. This working will take us into May, when our heavy rains are over, and when the plant begins to grow off; if I find the earth to crack, or be hard, I follow the hoes in a few days with the shovel-plow; if the plant will bear it, the large shovel, if not the small one next to the plant, and break out the entire middle deep and thoroughly. This is the only time I ever plow deeper probably than 2 inches after pitching my crop, and I do not use the turning plow after barring off. If the earth be light and mellow, I use the double shovel-plow; three furrows moulding the plant, and sweeping the entire middle.

At this second working I reduce to a stand, leaving the stalks about 20 to 24 inches in ordinary land; on the richer land from 2 feet to 30 or even 36 inches. After this working I keep the earth stirred with a cultivator or sweep, or double shovel, or harrow, keeping the bed of the row or drill free from weeds and grass, throwing a little earth at each working to the plant, but not enough to be called a ridge.

I give the crop as many and as frequent stirrings as I am able, seldom less than three or four with the hoe and plow each, making it a point to keep the plows in advance, unless an unfavorable season. when the earth is rather wet to plow, or grass has grown too fast, I then reverse it. The object in keeping plows and hoes several days apart, is to give a chance for grass to die, so that what has not been killed or covered by plows, can be cut out with hoes.

I endeavor to have my land in good order before planting; plow as deep as my horses can pull the plow, and commence to clean my crop before grass has got started, and by frequent stirring keep the crop entirely under my control. I have tried all the plans (except Dr. Cloud's, and intend to give that a trial) of planting and cultivating cotton, and think I can make as much on the same land with those implements that merely stir the surface, as others do with the turning or shovel-plow, and can with the same labor certainly cultivate more. I can not perceive any labor will be saved on the same space of land by manuring, as the same acre will require the same work; but the plant by being warmed with the manure will grow off faster. and if the crop can be ever doubled on an acre it will require only half the number of acres for cultivation.

I may err, as we all are subject to error, especially in being wedded to our peculiar mode of practice; but I think all practical planters will agree with me, that the first and often the second working of cotton must be slow and tedious, even should the planting be in May. It is impossible that the plant should grow off, until the fine roots, or spongioles have formed around the top roots to nourish the plant; in the mean time the fibrous rooted plants are growing; we must therefore work early, and every one who has followed hands, knows there is little dependance on covering grass it must be cut up. I therefore think we must scrape.

My hoes are home made, the blade entirely steel; I have some here that have been used for the past four years, and they have been used for cutting down sprouts, as well as cutting up grass and weeds. My foreman of the crop is furnished with a float file (flat file), and is required to keep the hoes sharp.

I now sum up, commence cleaning the cotton early, clean it well, return as soon as possible, throw earth, or mould to the young plant; if the earth be hard, give a thorough plowing; keep the earth light and mellow, and the plants clear of grass and weeds. In my next I will give you the preparations for gathering.

M. W. PHILIPS.

In justice to the writer of what follows, we should say, that it was received a few days after the date of it in March, but its publication was postponed for the purpose of giving place to other correspondents. Any similarity of views with those heretofore expressed in this work, can not be owing to their appearance in the preceding numbers.

For the American Agriculturist.

HINTS FOR THE MANAGEMENT AND FOOD OF DOMESTIC ANIMALS.

Buffalo, March 10, 1843.

Some of the most common errors in farm management, and which claim the practice of antiquity for their sanction, are perfectly apparent to those of ordinary perception, who will give sufficient attention to the subject to detect their absurdity. Among these, the system of stinting the food of growing, working, or fatting animals, milch cows, or indeed any class of stock, is one of the most palpable, and at the same time, most indefensible. *Stuffing*, except for fatting animals, is not the system to be inculcated or indulged in with impunity, but an adequate *supply of wholesome, nutritious food, adapted to the wants and circumstances of the animal, should at all times be within its reach.* The reason for this rule is so plain on a moment's reflection, that time would almost seem lost in illustrating it; yet so important is it to the farmer, and so generally neglected by many of the most intelligent among them, that a statement of facts at some length, may well be excused.

It has been demonstrated by the most careful investigation, that an ox consumes, on an average, 2 per cent. of his own live weight per day of good hay, to preserve him in condition. To accomplish ordinary labor, he requires to have this food increased by one fourth, consuming 2 1-2 per cent. per day. Now what is the inference deducible from this fact, and fact it is *in principle*, if not entirely *in degree*. *Why, that every yoke of idle cattle consumes as much food as is expended in the labor of* 4 *yoke;* that is, it requires as much to support 5 yoke idle, as 4 yoke at work; or, *one yoke will perform* 4 *days' work with the food necessary to support them five days in idleness.* The unprofitableness of allowing cattle to be idle is diminished in a great degree, when applied to such as have not entirely attained their growth, when of course a part of the food consumed goes to the increase of the animals. How vastly more economical, then, is that system which furnishes to working cattle a liberal quantity of nutritious food, and exacts from them in return, a fair equivalent of labor.

A cow, not in milk, eats 2 per cent. of her weight in hay per day, yet when giving milk, she requires but 3 per cent. With a given amount of pasture then, 2 cows may afford a good supply of milk, on what is necessary to support 3 which do not furnish any equivalent for the food consumed. The advantage of keeping a smaller number of cows *full fed*, in which the milking qualities are well developed, in preference to wasting the same food on a greater number of half-starved animals, illy adapted to the purpose required of them, is perfectly obvious.

An ox eats but 4 1-2 per cent. of his weight per day to fatten, when, as we have said above, he consumes nearly half this amount to support life. How important to an economical expenditure of food then, that the fatting animals have all they can eat, instead of distributing it among a greater number; *for it should always be borne in mind, that the vital machine must in all cases deduct a certain amount to support itself, before anything is added in the shape of milk, labor, or fat, for the profit of the owner.*

Another important consideration is, *to adapt the food to the object desired.* It is well known, that different kinds of food vary essentially in the principles which compose them. All kinds of grain, peas, beans, and ripened grass, contain a much greater proportion of nitrogen than fresh grass and hay cut in blossom, roots, fruit, &c. The fat of animals contains no nitrogen, and butter scarcely an appreciable quantity, while the lean or muscular portion of flesh and cheese, each contain a large proportion. It is well ascertained, that of all the carbon taken into the stomach as food, the horse daily expires about 100 ounces, and a milch cow about 70 ounces, and an adult man taking moderate exercise, 13.9 ounces in the form of carbonic acid. This expenditure of the carbon of the food is under all circumstances absolutely essential to respiration. All action or motion, or force, requires an expenditure of the muscular portion of the animal, that is, the more highly nitrogenized part. It follows, then, from the above principles, that for the performance of labor, well ripened grass and grain* are required; and they are equally neces-

* I see by a recent analysis of corn, potatoes, and ruta-baga, by Dr. Dana, that he has placed corn at a very low point, as affording material for animal flesh or muscle. His table stands thus:—

	100 *pounds each, of Corn,*	*Potatoes fresh dug,*	*Ruta-Baga fresh dug,*
Contain of flesh, forming principles, gluten, albumen, &c.	1.26	2.07	1
Fat, forming principles, as gum, sugar, starch, oil, woody fibre, &c.	88.43	24.34	13
Water	9	72	85
Salts	1.31	1.39	1
	100	99.80	100

Now if the above be a correct analysis, and we have too

sary to produce the maximum of cheese and wool, the peculiar principle of the former, casein, and all the latter, being highly nitrogenized; whereas, if fatting alone is the object, roots may be plentifully added to the hay and grain. Cows do not yield so much cheese when confined in a stable, as when rambling freely over a pasture, though they will yield much more butter on the same food when confined. It is very properly supposed that exercise is essential to the fullest development of the casein in the milk, it being produced by the consumption of the tissue, and its subsequent conversion into casein.

Another great consideration in the economical management of animals is, that they be as well protected from cold and storms as circumstances will permit. The propriety of this will appear from the fact, that the expenditure of the carbon of the food above stated, is required to sustain the animal heat at the necessary temperature, and if this heat be abstracted from any cause, as exposure to cold, winds, or wet, an additional amount of food is consumed to supply the waste thus occasioned. This is an inevitable deduction from the most firmly established principles of science, and however the health and thrift of animals which are subject to such exposure may appear to controvert it, actual experiment has fully confirmed the absolute certainty of the conclusion. Animals may be as healthy, and thrive well when exposed to the inclemency of the weather, yet they will require a much greater quantity of food to produce the same effect, than when properly housed and protected.

Hens provided with a warm room, will lay all winter on the same food that they require without laying at all, when exposed to severe weather.

Dr. Playfair states, that in an experiment made by Lord Ducie, 100 sheep were placed in a shed, and ate 20 pounds of Swedes turneps each per day; another 100 were placed in the open air, and ate 25 pounds per day; yet the former, which had one fifth less food, weighed, after a few weeks, 3 pounds more per head than the latter. He then fed 5 sheep in the open air between the 21st November and 1st December. They consumed 90 pounds of food per day, the temperature being at 44 degrees; and at the end of this time they weighed 2 pounds less than when first exposed. 5 sheep were then placed under a shed, and allowed to run about in a temperature of 49 degrees. At first they consumed 82 pounds per day; then 70 pounds, and at the end of the time they had gained 23 pounds. Again, 5 sheep were placed under a shed as before, and not allowed to take any exercise. They ate at first 64 pounds of food per day, then 58 pounds, and increased in weight 30 pounds. Lastly, 5 sheep were kept quiet and covered, and in the dark. They ate 35 pounds per day, and increased 8 pounds.

Mr. Childers states, that 80 Leicester sheep in the open field, consumed 50 baskets of cut turnips per day, besides oil-cake. On putting them in a shed, they were immediately able to consume only 30 baskets, and soon after but 25, being only one half the quantity required before, and yet they fatted as rapidly as when eating the largest quantity.

The minimum of food then, required for the support of animals, is attained when closely confined in a warm, dark shelter; and the maximum, when running at large, exposed to all weathers.

According to the above principles, no more wasteful system could be adopted for the rearing of horses in the state of Vermont, than is detailed by Mr. Meech, in his communication comprised under the questionable title of "Transactions of N. Y. State Agricultural Society for 1841," page 302. If land is comparatively valueless, his experience of the freedom of the animals from disease, may justify this system; but if they are required to maintain their growth and sustain their vital temperature, on the scanty gleaning afforded by the wintry pasture of "from 400 to 500 acres," in that high latitude, the land can yield but a meager amount of profit.

But let us look a little into the outward, visible world, exposed as it has been for 6,000 years to the unobstructed gaze of the multitude, and see what that teaches as to the correctness of the principles here laid down. Let us take the hybernating animals for example, and see what they practise. We find the bear, that destroyed whole corn-fields in the autumn, when the rigor of winter sets in, crawls into a hollow log or tree, and there coiling himself snugly in his nest, he dozes out two or three months, or more, in the dark, dry, warm retreat he has chosen, without indulging in a mouthful of food. Using no exercise, there is scarcely any waste of the flesh or muscle; and the large store of fat secreted in his system, affording about 80 per cent. of carbon, furnishes all that is necessary to the support of respiration. If exposed to the weather and exercise, could he sustain life for a fourth of the time, he can by the careful husbandry of his resources? Could he exist for any considerable period if he went into his winter quarters lean? By no means, as his store of carbon from the fat would be soon exhausted, and he must then cease to breathe, or renew his supply by taking more food. Even Bruin may teach many of our intelligent farmers wisdom, in what essentially affects their interests. The length of time he can abstain from food is precisely in the ratio of the temperature by which he is surrounded, his quiet, and the quantity of fat he carries with him to his den.

Other and extensive classes of the animal creation, such as toads, frogs, lizards, serpents, turtles, many species of fish, and nearly all the insect tribes, when exposed to a temperature below the freezing point, become torpid, with a total suspension of all the powers of life, and in this condition they remain without food, till the breath of spring again wakens them to renewed vigor. The vital

much reliance on the accuracy of Dr. D. to doubt it, the feeding of Indian corn to working animals is a most wasteful system, as it affords really less material for muscle, which is the main thing required, than potatoes, which are usually worth not half the price: and if we add the salts to the above, which no doubt constitute an important part of what is desired, it yields but 28 1-2 per cent. more than ruta-baga, which are worth but one fourth the average price of corn. The great and peculiar value of corn is seen in its fatting properties, containing, as it does, nearly 9-10 of its whole weight of this principle.

principle in toads, frogs, and many other species of reptiles, may remain suspended for thousands of years, when it is occasioned by the entire exclusion of air. Too many well-authenticated instances have been given, to admit of any doubt of the truth of this assertion. In opening cavities in the solid marble, sandstone, breccias, or conglomerates, and other species of rocks, these reptiles have been seen to leap out, and exhibit all the activity of the most youthful of their species. And from the well-known slow formations of these minerals, it is certain that centuries, and more probably their decades, must have elapsed, since these specimens of antiquity crawled into these fissures for a temporary asylum, and were there imprisoned for successive ages.

It was one of the fables of past times, which came down late into the last century, for it was asserted by the learned Dr. Johnson and others, that some species of birds, especially the different varieties of the swallow, buried themselves on the approach of cold weather, in pools and stagnant waters, and came out in the following spring, to renew their life of activity and song. But this was a mistake, originating from the fact, that many of the feathered tribes, and especially the black-bird and hirundo family, gather about marshy places in great numbers in autumn, preparatory to taking their distant flight to the sunny regions of the south, and being last seen here, they have, on this slight evidence, had their wintry residence assigned them among the amphibious and finny tribes, by those who ought to have drawn their conclusions more carefully. The chimney, and some other varieties of the swallow, have occasionally been discovered hybernating in large hollow trees for successive years and in these places, they have been found in a chilled, torpid condition; and from the great accumulation of skeletons and feathers at the bottom, it is believed only the youngest and most athletic survive, to renew their existence the following summer. In all the instances above cited, life is continued without the aid of food, for not a particle is taken while the being continues in a state of torpor. When life is accelerated on the return of spring, the bear that slept, undisturbed by hunger, from December till March, slaughters whole sties of pigs to sate his greedy appetite. The frog, that was contemporary with his kin, which, at the command of Moses, infested the palaces of Pharaoh and his subjects, has dosed through 3,500 years, perhaps, without one twinge from his gastric, now demolishes whole hecatombs of flies at a single supper; and the twittering swallow, that skims the placid waters in a summer's eve, like the fitful tracery of a glancing dream, enmaws an insect at every angle of its arrowy flight.

The nurseling that spends its time between the maternal breast and its downy cot, and knows no other exercise than the nurse's fondling, when healthy and well supplied with food, is always fat.

Animals fat slower in winter on the same amount of food than in the summer, or require more food to produce the same quantity of fat in this season, except when annoyed by excessive heat or flies; the irritation and exercise occasioned by these, and the consequent loss of flesh, being sometimes more than an equivalent for the extra loss of the carbon from the system in extreme cold weather. Animals will fat much faster in cool weather by having their food given them of the temperature of the blood, which ranges in the domestic animals from 98 to somewhat beyond 100 degrees. They should not be allowed an excess of water, and some assert that salt is prejudicial to their fatting, perhaps in consequence of inducing too frequent drinking. Its healthful influence on the system, should, however, always insure its use. Excessive quantities of watery food, as uncooked roots, pumpkins, and fruits, are hinderances to speedy fatting. These all contain less water when steamed or boiled, and drained.

How different is the condition and treatment of the thoroughly trained racer. Here the object is to get sinew, muscle, fibre. Fat is but an obstruction of the object desired, and the great and necessary aim is to get rid of every particle of it, by a rigid course of severe exercise and sweating. Two objects are indispensable to the racer, abundance of well-prepared muscular flesh, unaccompanied by fat; and sufficiency of carbon to supply the excessive call for respiration, induced by his incredible exertions. But all vegetable food furnishes enough of carbon, and it is only necessary to find the due proportion of that which is sufficiently nitrogenised. This can only be obtained from grain, in a condition suited to the stomach of the horse.

In man and all carnivorous animals, nitrogen is procured principally from the flesh consumed, though much is afforded by the finer portions of grain, and a very small portion from vegetables. Roots, fruits, sugar, beer, wine, &c., yield a supply of carbon. Food, whether in man or beast, should not be taken in too concentrated a form. A mixture with certain less nutritious substances, is requisite to distend the stomach and allow it an opportunity for healthful action. Captain Parry, in his almost superhuman efforts to reach the North pole, carried with him *pemmican*, which is dried beef reduced to the smallest possible compass; but while this afforded the most nutrition in the least bulk and weight, it was necessary to expand the stomach by the addition of some lighter food.

The vast difference in the aliment of persons under the poles or the equator, is worthy of note. The denizen of the tropics is forced to confine himself to the lightest kinds of sustenance, rice and other grain; fruits, acids, &c., containing on an average not more than 12 per cent. of carbon; while the Laplander, Norwegian, and Esquimaux, can swallow with impunity, fat and alcohol by the hour; the former containing over 70 per cent. of carbon. This excessive consumption of carbon, in which these articles are so rich, is rendered innoxious, in consequence of a proportionate combustion with the oxygen of the air, which is necessary to supply the waste of animal heat, occasioned by their rigorous climate. This accounts for the increased quantity of meat and other food that may be eaten in winter, beyond what is required for summer, by such as take active exercise in the

open air; for they who keep within the range of a good stove, and are exposed to a summer temperature only, must continue to moderate their diet in winter, equally as in summer.

The excessive fondness for the chase and outdoor exercise among the English, has a deeper and more urgent motive, than tradition, and the love of sport. It has its foundation in the constitution itself. The highly nitrogenized food, beer, and spirits, they consume, induce an irritation and restlessness, which seeks relief in violent and protracted exercise. The gourmand, unless he can expend his surplus nourishment by a proportional exercise, or purge his overloaded system by daily draughts of the mineral or artificial waters, must soon fall a victim to apoplexy. So too, if he carries his habits of gormandizing into the equatorial region, the liver complaint or other diseases, soon terminate his life which has become a just forfeit to his folly.

Fat operates in two ways for a defence against cold. It not only supplies carbon for combustion, by which animal heat is sustained, but being one of the best non-conductors of heat, when placed around the body, as in most cases it is, it effectually checks the escape of heat. What but the foot-thick covering of blubber, prevents the temperature of the whale, and the whole tribe of cetacea, seals and other warm-blooded animals, which make the great arctic deep their habitation, from running below the freezing-point? The well-conditioned domestic animal which is exposed to the cold of winter, effectually interposes his shield of fat to the inroads of frosts, and scarcely feels the severity, which pinches the starveling to its very centre. A half-famished man will freeze to death, by the side of one well fed and well fleshed.

Clothing and food in severe weather, to a certain extent, supply the place of each other; deficiency of the one must be supplied by the other, or waste and ultimate destruction must ensue. But the subject has already been sufficiently extended. It is perhaps unnecessary to add, to the intelligent reader, that the recently published principles of Liebig's animal chemistry has furnished an occasional hint to the above.

R. L. Allen.

For the American Agriculturist.

SOUTHERN CALENDAR FOR JULY.

As a general rule for the past 12 years, I have been able to give my cotton crop its last working this month, some seasons the weeds being too large to work with plows without material injury even before the 10th.

You will find the cotton-plant to retain its fruit, the bowls, from the time of forms being first made, which is the future bloom and bowl in embryo, by being stirred frequently, preventing in some degree the changes of nourishment to the plant, which causes their dropping; and I think deep plowing early in the season will be a prime aid in this thing. I therefore run my surface plows and cultivator, &c., as late as I can, and not to injure the plant, by breaking its limbs. If weeds and grass should spring up after this, there will be much gain to the succeeding crop, to cut them out with the hoe, in order to prevent their seeding.

The blades from the early planted corn can be stripped now for fodder—better to lose a portion than pull too early. Let the shuck or husk on the ear change from the green to the whitish cast, then tie a handful or so to itself, and thrust the end of the tie between the ear and stalk—I object to breaking down the cornstalk. This will require more time to strip the blades, but in the end you will gain, as it can be got in sooner if a rain threatens or if caught in a rain, it is not injured so much. Cure it well before stacking, same as pursued with oats. Late corn will need plowing now, plant peas also in it, even if you have a good stand of pumpkins, they will repay cost of seed by their benefit alone as manure.

The late plantings of potato drawings, and the plantings of vines, will require plowing and drawing up with the hoe; continue to plant out vines. If not ground enough in your potato-patch, bed up ridges in your old corn, two furrows will do to plant on, which will not materially injure the corn, and can be added to, on the first working; or plow up a choice piece of the stubble ground. Your crop of corn being entirely out of your way, or nearly so, you can devote a few days to planting vines, and if the season be at all favorable, the work will be well repaid, in the feed alone for stock.

Millet grass must be cut when just turning, if for feeding, and treated as recommended for oats. Have a good substantial grass-knife made in a home shop; it will be worth half a dozen of the thin, light things sold in stores, for this purpose any how.

You can not possibly expend a few days' labor to a greater advantage, if your crop will admit of it, than in grubbing up small growth, cutting down saplings, and deadening greens for a calf-pasture, to be sown in September or October in rye, without plowing even, if you can not plow it, the fall of leaves will cover it, so as to bring it up and give you a fine bite all winter. You may need more water; if so, dig a ditch across a hollow, some 3 feet deep, throw the earth below, then commence above and dig out the earth, and fill up the ditch, leaving no roots, &c., in the earth; continue digging until of a desirable size, and the embankment be some 4 or 5 feet high, and 5 to 7 feet wide on the top; if the hollow receives much water, dig at one or both ends a ditch about a foot below the level of the dam, wide enough to carry off all water that may fall after the pool be full, and to empty some 10 feet below the embankment. This will protect the embankment from blowing up; it will not retain water well under a year or two, unless the bottom and lower side be puddled, or frogs be fed on it, when little wet.

Make it a part of your regular business, at this season of the year, to gather leaves from the woods, swamp earth and mud into cow and horse lots, gather the manure from lots and stables, place it in your pen or sink, and on it scrapings from wood-piles, &c., which should have a shelter to protect from sun and rain, or it might be well to haul a part of this on the piece of ground designed for turneps, but do something at it. Prepare your turnep-patch, either old ground by manuring high and plowing, or a piece of new ground. The cotton-picking season is now rapidly approaching; prepare baskets and sacks to pick in all leisure time, especially on wet days. Top cotton the last of this month. There is no doubt but that it is advantageous on rich land, and as to thin land, a planter of 30 years' standing, who then worked 250 hands, assured me it would be time well spent on any land. Either pinch off the tender top part of the plants, or cut off with a knife.

M. W. Philips.

For the American Agriculturist.

NORTHERN CALENDAR FOR JULY.

KITCHEN GARDEN.—Cabbages of the several varieties can now be planted for late crops. Moist weather should be selected for this purpose, and the plants should be immediately and frequently watered, until they are well rooted. Melons, squashes, pumpkins, &c., should be carefully hoed, and kept entirely free from weeds; otherwise, they will not produce good fruit. Melons and cucumbers for pickles can be sown in the early part of this month. Kidney-beans, small salad, carrots, turneps, and spinach, should be sown for fall and winter use. Celery should be planted out in trenches; and some variety of radishes and peas may be sown with reasonable prospect of success if the season should prove moist. Egg-plants, peppers, and tomatoes, should be planted out, if not done before. Collect all the vegetable seeds that have come to maturity, and dry them well before putting away; also, gather herbs as they come into flower, and dry them in the shade, that the sun may not render them entirely free from flavor. Pull up the stalks of beans, peas, &c., which have done bearing. Water may be frequently and beneficially applied, but it should always be done at the close of the day, otherwise the plants will be injured by the heat of the sun.

FRUIT GARDEN.—Budding may be performed upon pears and apples the latter part of this month. Gather from the trees, and give to the cattle or swine, all fruit that is decayed or punctured by the insect, otherwise the insect, which now exists as a worm in the premature fruit, will soon be able to fly and attack the remainder. Also, continue to cut off all the wood as fast as it may appear to be infested by the insect which produces a black knot. Keep the ground well cultivated among the trees. There is very little else to be done in the fruit garden this month, excepting it may be to consume its productions, for which directions may possibly not be requisite.

PLEASURE GARDEN.—Bulbous and tuberous roots can now be taken up, and tulips, hyacinths, &c., carefully put away for planting in the fall. Herbaceous flowering plants can still be transplanted from the seed-bed to the border, and should be taken up with as much earth as possible about the roots. Hedges can also be clipped in the early part of this month. Walks and borders should be kept constantly clear of weeds, and a general air of neatness should pervade every part of the garden. S. B. PARSONS.

For the American Agriculturist.

VENISON STEAKS.—Cut them moderately thick, and place on a gridiron over a slow fire. When done on both sides, remove them to the plate, and on both sides of each sprinkle salt, pepper, powdered cloves, butter, and currant jelly, and pile as compactly as possible. This keeps them warm, and furnishes a rich gravy.

A LADY.

GOOD EFFECTS OF PLASTER ON FRUIT-TREES.—Mr. Mussey states, in the Watertown Herald, that by ascending a fruit-tree while in blossom in the spring of last year, and sprinkling plaster freely upon them, the tree bore 20 bushels of apples the following fall, while it had never produced over 2 bushels any previous year. It is said, also, that plaster is a good preventive to the blast.

THE TURNEP-FLY.—Rolling the earth evenly and compactly together destroys their harboring places, and is a preventive to their multiplication and ravages.

FOREIGN AGRICULTURAL NEWS.

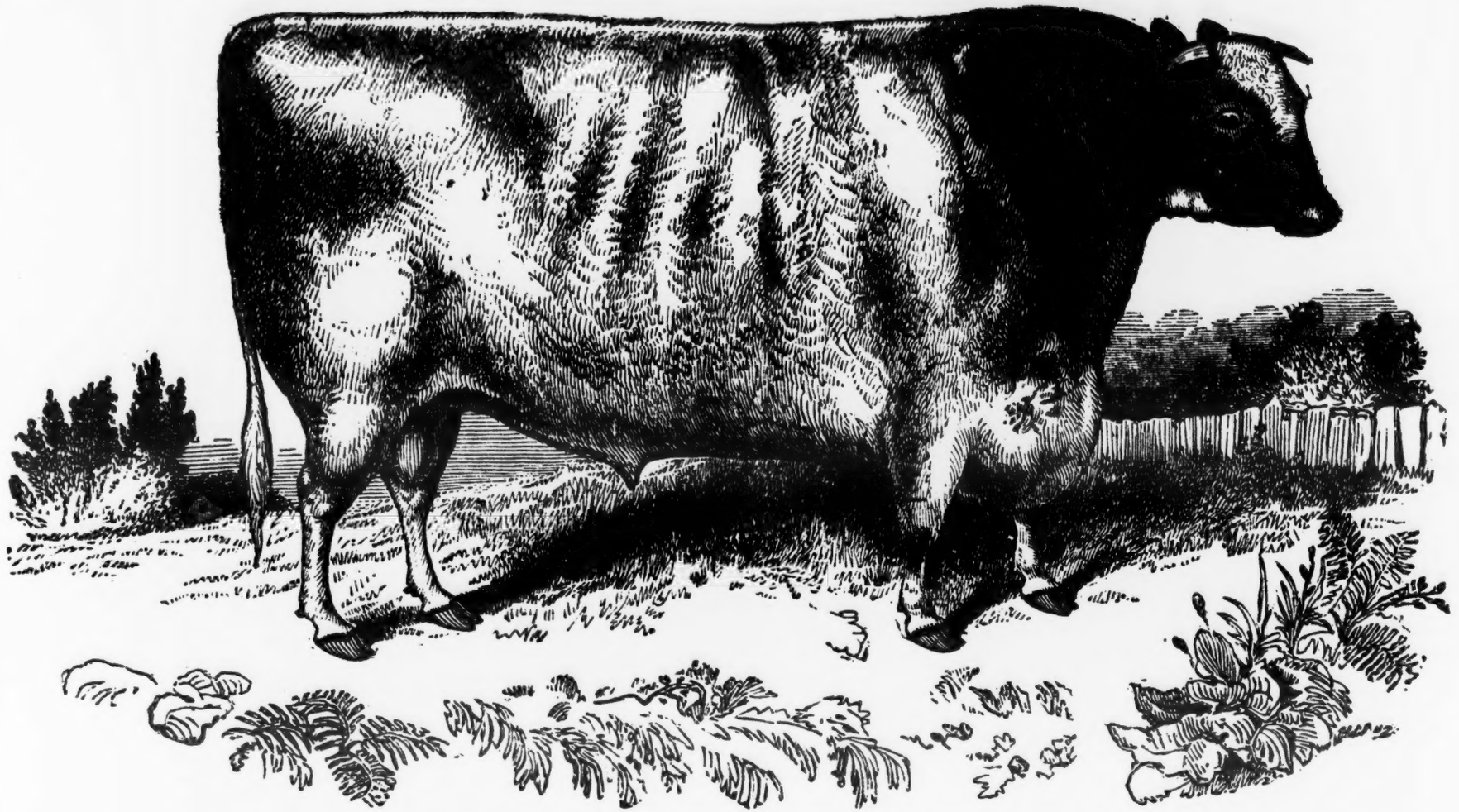
By the steam-packet Columbia, we have our files of European journals to the 4th June.

Markets.—Cotton was dull, although there had been no reduction in price. The import into Liverpool since 1st January, amounts to 968,000 bales, against 728,000, same period last season. The stock on hand is estimated at 855,000 bales, against 640,000, at same period last season. Stock on hand at Havre, 31st May, 156,217 bales; same time, 1842, 141,157 bales.—American Beef has at length taken precedence in the English market, and is now sought for with avidity at higher prices than the Irish.—Pork has advanced a trifle, but it is generally too fat to suit the European market. We must hereafter kill smaller and more delicate pigs for it. Pigs weighing from 150 to 200 pounds, are the most suitable for English packing and bacon.—Cheese has risen also, and prime large ones are much sought for. Purchasers are flocking into London for it from all parts of the country.—Lard, Flour, and Wheat, are selling at a little better prices, and are in good demand, especially the latter. All other American products remain without change, and a moderate business is doing in them.

Money continues abundant, and at low rates. The flow of specie to this country has somewhat ceased; there remains, however, a great abundance of capital in Europe seeking investment.

Chinese Agriculture.—From a work recently issued in England, under the title of "China as it Was," we make the following extract: I took our cutter the other day, and eight men, and starting from the ship at five o'clock in the morning, went about forty miles up the labyrinth of islands, landing at several places, and going into their villages. The country was beautiful in the extreme—much more so than I ever saw. Fancy the most hilly country that can possibly be, one mountain rising from the foot of another in the most varied manner, and cultivated in the highest degree to the very top! In fact, their farming would not disgrace an English farmer; and I very much doubt whether a man put down here from the clouds would know that he was not in England, but for the circumstance that pieces of land which no Englishman would think of venturing his neck upon, are here in the most beautiful order; indeed, the resemblance between the two countries is in every respect most striking; and I decidedly think that the people I have seen are quite as much civilized, if not more so, than you would find in England in the same situation; they certainly exceed them in politeness. One village I landed in, I sailed the boat up a beautiful creek for some distance, until I was stopped by some large lock-gates, when I landed, and walked up to the houses, alongside quite as good a canal as any I ever saw, with good strong locks on precisely the same principles as our own. The stone bridges over it were beautiful, with heads, carved in stone, of angels and devils, stuck at different places on the sides. The houses were built of square stones, extremely neatly put together, and roofed with beautiful red tiles, each ornamented with a different device. The inside was generally divided into three or four rooms, all very neat; and there the similarity between them and Old England, a place they never heard of, became most ridiculous. There was the plastered floor, the same shaped tables and chairs, and the closet, with the cups and saucers (of the most beautiful china, by-the-by); there, too, was the kitchen—the wash-house, with the boiler and sink. In the yard, again, the pig-sties were very amusing—the identical pig-sty door that they have at a place

DURHAM BULL CLEVELAND LAD.—(FIG. 29.)



The Property of Thomas Bates, Esq., Kirkleavington, England.

DESCRIPTION AND PEDIGREE.—Color a rich, red roan; got by Short Tail (2621); dam Matchem Cow, by Matchem (2281); d. 2, by Young Winyard (2859), sometimes called Young Wellington.——Short Tail (2621), bred by Mr. Bates, got by Belvedere (1706); dam Duchess XXXII, by Second Hubback (1423); d. 2, Duchess XIX, by Second Hubback (1423); d. 3, Duchess XII, by the Earl (646); d. 4, Duchess IV, by Ketton II; d. 5, Duchess I, bred by Chas. Colling, by Comet (155); d. 6, by Favorite (252); d. 7, by Daisy Bull (186); d. 8, by Favorite (252); d. 9, by Hubback (319); d. 10, bought by Chas. Colling, from Stanwix, in 1784, the last of the Duke of Northumberland's celebrated stock of Short-Horns, by James Brown's Red Bull (97).

you know very well in Yorkshire, opening with a large wooden latch, and a hole to put your finger through from the outside to lift it up, squeaking on its hinges when opened or shut, the same to half a note.

Advantages of Science to Agriculture.—A Report of the Wenlock Agricultural Club says, that a better instance of this can not be adduced than that of the celebrated French chemist, Lavoiser, who is reported to have cultivated 240 acres of land in La Vendee on chemical principles, in order to set a good example to the farmers; and so successful was his mode of culture, that he obtained a third more of crop than was procured by the usual method, and in nine years his annual produce was doubled.

Simple and Economical Plow.—Mr. Rouse has introduced a plow, which, if it can do half what he promises, will prove the most useful and perfect thing of the kind yet known. It is thus described: The share may be deepened, or flattened, to or from the land in an instant without stopping the horses, or the plowman's hand being taken off the plow; that it will go with or without a ground, with or without wheels, with a wood breast for turnep and summer land, and with any shaped iron breast that may be required or preferred; that it requires no sledge for its removal from place to place; that the coulter may be moved six ways, by a movement effected in an instant, and so firm that no horse can move it; that the furrow can be taken any width and any depth, up-hill or down-hill with equal facility; that it will be less expensive to the farmer and more easy to the laborer than any plow yet made, the whole construction being so simple as to be kept in repair at less cost than other plows.

Great Sale of Short-Horns.—Mr. Watkin, of Plumpton, made a sale at auction of 55 head of Short-Horns, last month. Upward of twelve hundred gentlemen were present, as bidders. The sale went off with spirit, and the prices ranged mostly from 20 to 80 guineas ($100 to $400). The names of the animals are not familiar to us; we can therefore form no opinion as to the breeding of this stock.

Crops.—The weather in England has been unprecedently cold and wet during the whole month of May, and up to the 4th of June. The grain crops were consequently looking in some instances of a sickly yellow. The growth, however, is large; and if the weather changes favorably, an abundant harvest is anticipated. Grass and root crops were looking uncommonly well.

Ayrshire Cows.—Count de Gourcy states, in his visit to Mr. Smith, of Deanston, that he has crossed his Ayrshire cows with Short-Horn bulls, and adds that this cross-breed proves the best milkers.

South-Down Sheep.—The count also states, that he found at Mr. Watson's, of Keylor, a flock of 300 South-Down sheep, doing admirably on poor, wet, heathy -mountain pasture, that lets for 2s. only per acre. They subsist there eleven months of the year on this poor pasture alone. The other month they have the additional food of turneps.

Prolific Sow.—Mr. Wilkins, of Longton, has a sow, which recently brought forth nineteen pigs at a litter, eighteen of which are alive and doing well.

Solon Robinson, Esq.—We find the excellent communication of our correspondent, Mr. Robinson, of Illinois, which appeared in the February No. (p. 338) of the American Agriculturist, quoted at length in the London New Farmers' Journal, of 22d May.

Indian Corn for Soiling.—The Journal above, recommends Indian corn to English farmers for soiling. We often did the same when travelling in England, assuring the farmers, although the corn would not ear well and ripen with them, on account of their cool, moist summers, still, as green food for stock, it was quite equal to their best grasses, and that a greater weight of herbage might be obtained per acre, than from any other grass that they could possibly grow; and that it would come in at a time when other food was comparatively scant. We scarce know the value of corn and corn stalks at home here yet.

Cultivation of Wheat in France.—The Revue des Economistes states, that the production of wheat has been nearly doubled in France within the last eight years. Forty out of every hundred acres of the tillable land is now in wheat, and a greater quantity of this grain is produced in France, in proportion to its territory, than in any other country of Europe.

Camellias.—A Parisian florist, famed for his camellias, sells £500 worth of that flower alone during the Parisian season, for ladies' bouquets.

The Murrain among Cattle.—This disease, by which thousands of cattle have been destroyed in the three kingdoms, still continues to rage in several districts, and is not extinct in Lancashire, though less destructive here at present than it was during the winter months, when some of the Lancashire farmers lost the greater part of their stock. It is at present raging with very great violence in the south of Scotland.

Increase of the Royal Agricultural Society.—This useful institution now numbers upward of 7,000 members; 1,436 having been elected the past year. Its funded property amounts to £7,700; and it has besides a surplus cash balance on hand of £1,200.

Mr. Henry Colman.—This gentleman has arrived safely in England, and we notice his being present at a meeting of the council of the Royal Ag. Soc., and his making a short address, and returning thanks for being elected an honorary member. He made at the same time a donation of books on American agriculture to the society.

Cleveland Lad.—On the opposite page, we have the pleasure of presenting our readers with the portrait of the prize bull Cleveland Lad, of the celebrated stock of Thomas Bates, Esq., of Kirkleavington, England. We had the advantage of seeing this superb animal at the great show of the Royal Agricultural Society, as also at that of Yorkshire; at both of which places he took the first prizes, as being the best bull for his age present. He is an animal of immense substance and great constitution, and very imposing in his appearance. According to our best recollection, the artist has flattered him a trifle from the pin bones to the rump. He is fine in his points, with a deep chest, and wide and well-projecting brisket, points in which Mr. Bates's stock especially excel.

Leibig's Theory of the Nutrition of Plants.—This work has been powerful attacked by the celebrated German physiologist, Dr. Hugo Mohl, in a pamphlet of 60 pages, accusing him of not possessing even an elementary knowledge of the organization of plants. That to consider humus as the chief food of plants, is not true, &c., &c. Professor Schleider also agrees with Dr. Mohl in his opinion of Leibig's late work. We shall give a synopsis of the pamphlet in our next.

American Plants.—A great show of these commenced in London the first week in June. It is said to be of unsurpassed magnificence, embracing 160 yards of winding walks, bordered by the most magnificent Rhododendrons imaginable, intermixed with Azaleas of many colors, and the broad-leaved Kalmia. Of the Rhododendrons, there was one specimen 18 feet in circumference, 9 feet high, and loaded with about 600 clusters of beautiful pale violet blossoms. A broad-leaved Kalmia stood 7 feet high, and 19 feet in circum., and was a complete spread of the finest waxy flowers.

Editor's Table.

NOTICES OF THE PRESS.

THE POMOLOGICAL MAGAZINE.—We have received the first No. of this work, which is to be issued bi-monthly; six numbers a year, with lithographs of fruit after nature; containing descriptions of the same; making 20 pages in each number. It is edited by Charles W. Elliott, and published by U. P. James, of Cincinnati. Price $2 a year. We have the pleasure of a personal acquaintance with the editor, and know him to be a man of ability, and a practical horticulturist. We have no doubt he will make a good and useful work of his Magazine; and we wish him every success in his enterprise, for it is a publication much needed at the west. There are six embellishments in No. 1, for June, viz.: The Beurre D'Arembey Pear, the Washington Plum, the Baldwin Apple, the Elton Cherry, the Detroit Apple, and the Grape. The work is octavo, and very handsomely got up.

THE RABBIT FANCIER, containing full instructions for the management of a Rabbittary; with hints on experimental breeding, &c., by George Rowden. Printed by Henry F. Middleton, Shelbyville, Ky. Price 12½ cents. This is a neat little octavo pamphlet of 16 pages, and contains some curious matter on the different varieties and breeding of rabbits. The writer seems to prefer the Spanish rabbit, more generally called the Fancy Lop-ear, as not only more beautifully marked, but at least twice as large as the common English domestic rabbit, and its flesh is considered almost equal to the English hare. We once kept a few of them, and liked them very much; but they unfortunately fell a prey to our terrier dogs, and we never had the heart afterward to renew the breed. They sometimes bring 20 guineas ($100) each, in England. Breeding them is frequently quite profitable. Mr. Rowden gives the net profits of one establishment as upward of $3,000. We stated in our April No., that a farmer in Ringmer had sent 7,000 rabbits to the London market in one year. Whether Mr. R. got this fact from us or not we don't know. We can only say, as we have now given him a handsome notice, we wish he would send a pair of his best, next October, to one of our correspondents, Dr. M. W. Philips, of Miss., who will give him an equivalent by another in the Southwestern Farmer. His price is $5 per pair for young rabbits, and $10 for old ones.

THE AMERICAN FARMER, published at Baltimore, by Samuel Sands, of large quarto form, and containing eight pages weekly, at $2 50 a year. This excellent and spirited work commenced a new volume in May, and we are glad to see it in an improved style. The American Farmer, we believe, is the oldest agricultural paper in the United States. It was first commenced by J. S. Skinner, Esq., and was the earliest periodical on the subject of farming that we read. We have ever been indebted to it for much instruction and amusement, and we are certain that its contents have had a decided influence in forming our tastes and predilections. May it continue to flourish and be well supported for a thousand years.

BROOK FARM INSTITUTE, at West Roxbury, Mass. We have been sent a circular of this Institution, in which we see announced, as connected with it, a department for instruction in theoretical and practical agriculture, in which pupils are permitted to defray a part of their expenses by their labor.

THE LIFE AND SPEECHES OF HENRY CLAY.—This is neither a political nor a party work, but one of decided *nationality;* and as the distinguished subject has long been, and still is, one of our most eminent farmers and stock breeders, and as we are recently from a visit to his beautiful estate at Ashland, Ky., we have perused it perhaps with the more interest. It is issued from the Tribune press, by Greeley & McElrath, in two handsome octavo volumes, of nearly 1,100 pages, embellished by an elegant portrait of Mr. Clay, from an original painting by Linen; a view of his birthplace, a charming cottage in the Slashes of Hanover; and an engraved fac-similie of a letter from him. The memoir is from the fluent pen of Henry J. Raymond, Esq., and is written with perspicuity, force, and elegance. The arrangement of the speeches is by Mr. James B. Swain; and altogether it is the best edition of the surpassing eloquence of Mr. Clay that has yet been published. This superb work is afforded at the very low price of $1. It ought to be in every library in the United States.

From the same publishers, Messrs. Greeley & McElrath, we have the

AMERICAN LABORER, devoted to the cause of Protection to Home Industry, embracing the Arguments, Reports, and Speeches of the ablest civilians of the United States in favor of the Policy of Protection to American Labor, with the statistics of Production in the United States, &c., &c. 384 pages, double columns, octavo. Price $1.

PRINCIPLES OF POLITICAL ECONOMY, by William Atkinson, with an introduction by Horace Greeley.

CHEMISTRY of the Four Ancient Elements, Fire, Air, Earth, and Water, by Thomas Griffiths; also the BOOK OF PHILOSOPHICAL EXPERIMENTS, by J. S. Dalton, with numerous engravings, and upward of Three Hundred Experiments.

SKETCH OF THE PROGRESS OF PHYSICAL SCIENCE, by Thomas Thomson; also a course of *Lectures on Astronomy,* &c., by Dionysius Lardner.

A MEMOIR ON IRELAND, Native and Saxon, by Daniel O'Connell, M. P., with a portrait.

IMPROVEMENTS IN AGRICULTURE, ARTS, &c., of the United States, by Hon. Henry L. Ellsworth, U. S. Commissioner of Patents; to which is added a *Treatise on Raising Swine,* and the best method of Fattening Pork, by Henry Colman; also *A Treatise on Geology,* as connected with Agriculture, by Willis Gaylord.

The last five works comprise from 80 to 96 pages, double columns, each; handsomely printed in octavo form, and are sold at the very low price of 25 cents. They are all admirable books of their kind, and are emphatically what their enterprising publishers term them, "Useful Works for the People."

THE ORATOR'S LADDER, in three parts; the *Moral and Temperance Table Book;* the *Young Scholar's Table Book.* These are excellent little school books, published in a neat form and at a cheap price, by Nafis & Cornish, 278 Pearl street.

THE MISSISSIPPI VALLEY FARMER, is a new periodical, just issued from the press of A. W. Scharit, St. Louis, Mo., edited by J. Libby. Its form is royal octavo, double columns, 16 pages monthly. Price $1 a year. It is got up in pretty style, with wood cuts, and the first No. gives promise of being conducted with an average share of ability.

CHRONICLES OF SIR JOHN FROISSART, *of England, France, Spain, and the Adjoining Countries.* We think the public will feel particularly obliged to Mr. Winchester for the republication of this most rare, valuable, and singularly interesting work. These Chronicles were the inspiration of Sir Walter Scott and his romances, and have ever been the delight of all ages and classes since written. They are elegantly reprinted at the New World press, on extra superfine white paper, and splendidly illustrated with over 120 engravings, at a cost of $1,000; representing the scenes, costumes, sieges, battles, naval engagements, and tournaments of the middle ages. Cost of the English edition, $12; New World edition, only $2. In turning over these Chronicles, we have been quite interested by country scenes, which if not farming, is akin to it. Sir John mentions several famines, and great suffering in consequence of them; which would undoubtedly have been prevented, had the nations of Europe then possessed their present superior modes of agriculture.

THE ENCYCLOPEDIA OF MURRAY'S GEOGRAPHY.—Part 10 of this sterling republication by Lea & Blanchard is just issued. It finishes Germany, and enters upon Poland and Russia. Price 25 cents. For sale by C. S. Francis & Co., 252 Broadway.

TO CORRESPONDENTS.—J. J. McCaughan. We shall publish another article on Tussac Grass, in our August No., from the pen of Lieut. Governor Moody, of the Falkland Islands.

T. A.'s report of Fair at Fayette will appear in our next.

Americus, No. 4, Dr. Philips, and several other correspondents are received and will appear hereafter. Some of these are in type, but unavoidably deferred till Aug. No.

J. R. The Twenty Dollars are received, and all matters ordered will be attended to.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

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Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway, New York.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, JUNE 29, 1843.

ASHES, Pots,	per 100 lbs.	$4 62½	to	$4 69
Pearls,	do.	5 25	"	5 31½
BACON SIDES, Smoked,	per lb.	5½	"	6
In pickle	do.	5	"	5½
BALE ROPE	do.	6	"	9
BARK, Quercitron	per ton	22 00	"	23 00
BARLEY	per bush.	46	"	48
BEANS, White	do.	1 12½	"	1 25
BEEF, Mess	per bbl.	8 00	"	8 50
Prime	do.	6 00	"	6 50
Smoked	per lb.	7	"	7½
Rounds, in pickle	do.	4½	"	5½
BEESWAX, Am. Yellow	do.	28	"	30
BOLT ROPE	do.	12	"	13
BRISTLES, American	do.	25	"	65
BUTTER, Table	do.	13	"	15
Shipping	do.	6	"	10
CANDLES, Mould, Tallow	do.	9	"	12½
Sperm	do.	20	"	35
Stearic	do.	19	"	24
CHEESE	do.	4	"	7
CIDER BRANDY, Eastern	per gal.	43	"	45
Western	do.	30	"	35
CLOVER SEED	per lb.	5½	"	7
COAL, Anthracite	2000 lbs.	4 50	"	5 25
Sidney and Pictou	per chal.	— —	"	— —
CORDAGE, American	per lb.	11	"	12
CORN, Northern	per bush.	55	"	57
Southern	do.	55	"	56
COTTON	per lb.	5½	"	10½
COTTON BAGGING, Amer. hemp per yard.		— —	"	— —
American Flax	do.	— —	"	— —
FEATHERS	per lb.	19	"	28
FLAX, American	do.	7	"	7½
FLAX SEED, rough	per 7 bush.	8 25	"	8 50
clean	do.	— —	"	— —
FLOUR, Northern and Western	per bbl.	5 50	"	5 75
Fancy	do.	5 75	"	6 25
Southern	per bbl.	5 50	"	— —
Richmond City Mills	do.	—	"	— —
Rye	do.	3 25	"	3 50
HAMS, Smoked	per lb.	6	"	7½
Pickled	do.	4½	"	5½
HAY	per 100 lbs.	35	"	40
HIDES, Dry Southern	per lb.	8	"	9½
HEMP, Russia, clean	per ton.	200 00	"	205 00
American, water-rotted	do.	140 00	"	180 00
do dew-rotted	do.	90 00	"	140 00
HOPS	per lb.	9	"	12½
HORNS	per 100	1 25	"	5 00
LARD	per lb.	5	"	7
LEAD	do.	3½	"	— —
Sheet and bar	do.	4	"	4½
MEAL, Corn	per bbl.	2 87½	"	3 25
Corn	per hhd.	13 00	"	13 50
MOLASSES, New Orleans	per gal.	22	"	23½
MUSTARD, American	per lb.	16	"	31
OATS, Northern	per bush.	28	"	30
Southern	do.	26	"	29
OIL, Linseed, American	per gal.	75	"	80
Castor	do.	57	"	62½
Lard	do.	60	"	65
OIL CAKE	per 100 lbs.	1 00	"	— —
PEAS, Field.	per bush.	1 25	"	— —
PITCH	per bbl.	1 12½	"	1 37
PLASTER OF PARIS	per ton.	2 12½	"	2 31
Ground, in bbls	per cwt.	50	"	— —
PORK, Mess	per bbl.	11 00	"	11 50
Prime	do.	9 00	"	9 50
RICE	per 100 lbs.	2 25	"	3 00
ROSIN	per bbl.	70	"	1 06½
RYE	per bush.	67	"	69
SALT	per sack	1 40	"	1 50
SHOULDERS, Smoked	per lb.	4	"	4½
Pickled	do.	3	"	3½
SPIRITS TURPENTINE, Southern	per gal.	32	"	34
SUGAR, New Orleans	per lb.	5	"	6¼
SUMAC, American	per ton	25 00	"	27 50
TALLOW	per lb.	6½	"	7½
TAR	per bbl.	1 62½	"	1 87½
TIMOTHY SEED	per 7 bush.	11 00	"	12 00
TOBACCO	per lb.	3	"	7
TURPENTINE	per bbl.	2 50	"	2 75
WHEAT, Western	per bush.	1 20	"	1 23
Southern	do.	— —	"	— —
WHISKEY, American	per gal.	21	"	23
WOOL, Saxony	per lb.	32	"	37
Merino	do.	30	"	32
Half-blood	do.	25	"	27
Common	do.	18	"	22

New York Cattle Market—June 26.

At market, 900 beef Cattle, (750 from the south,) 85 Cows and Calves, and 1250 Sheep and Lambs.

PRICES.—*Beef Cattle* were very dull, and our highest quotations obtained with difficulty, viz.: $5 75 *a* 6 25 for qualities for retailing. 350 unsold.

Cows and Calves.—Sales of 65 at $20 to $25 *a* $28.

Sheep and Lambs.—All but 50 taken at $1 50 to $3 75 for Sheep, and $1 50 *a* 3 75 for Lambs.

REMARKS. *Ashes* continue to be in good request. *Candles*, the stock of sperm is light, and they are held firm. *Cotton*, the transactions have been comparatively limited during the past month, and the dulness of the article in Europe, has made holders here submit to a decline of ⅛ to ¼ cent since the arrival of the Columbia. Export since 1st September last, 1,903,607 bales; same time last year, 1,354,578; same time year before, 1,200,204. *Flour* is dull at quotations, and we think it has reached its highest price. *Grain.* Of *Wheat* we have only a light stock, and it is held firm, with an upward tendency; *Rye* has declined; *Oats* and *Corn*, plenty and dull. *Hemp*, in little demand. We hear of a superior quality of water-rotted, from the plantation of the Hon. Henry Clay, of Kentucky, having been sold in the Philadelphia market at $190 per ton. *Molasses*, dull. *Naval Stores*, in fair request. *Provisions* of all kinds rather flat, with the exception of *Lard*, which is in good demand. We see nothing particularly worthy of remark in other articles, save that *Wool* is brisk, and quite a probability of its advancing. The southwestern qualities are bringing a higher price than the northern, owing to their superior softness, which is attributed to climate alone.

Southern Business has commenced in the city tolerably brisk, and a reasonable trade from that quarter is anticipated for the coming season.

Money can be had in any quantity on first rate paper, for 3 to 4 per cent. per annum. On bond and mortgage, 6 to 7 per cent.

Stocks of the better kind are again on the advance, and in request.

Crops.—Wheat is suffering some from smut and the fly; and, although there are partial failures in particular districts, the yield throughout the country promises to be a full average. The harvest is now over in most of the southern states, and it has come in well. Corn is rapidly improving with our present fine weather. It is now getting somewhat dry, and a good rain would be acceptable.

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